Title of Instructional Materials: Macmillan-McGraw Hill

Grade Level: Grade 5

Reviewers:

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Summary of Macmillan-McGraw Hill

Overall Rating: ☐ Weak (1-2) ☐ Moderate (2-3) ☒ Strong (3-4) **Summary / Justification / Evidence:** Strong in problem solving, geometry, and discussion. Weak in fractions, measurement and data.	Important Mathematical Ideas: ☐ Weak (1-2) ☒ Moderate (2-3) ☐ Strong (3-4) **Summary / Justification / Evidence:**
Skills and Procedures: ☐ Weak (1-2) ☐ Moderate (2-3) ☒ Strong (3-4) **Summary / Justification / Evidence:**	Mathematical Relationships: ☐ Weak (1-2) ☐ Moderate (2-3) ☒ Strong (3-4) **Summary / Justification / Evidence:**

Macmillan/McGraw-Hill
Indiana Math Connects

[redacted]

INDIANA'S EDUCATION ROUNDTABLE 2010

Really like that strategies for problem solving are taught + modeled.

Built-in Workbook

1-2
2-3

Overall 3+

Short on multiplying fractions.

Spirals + reteaches

Instructional Materials Analysis and Selection

Phase 3: Assessing Content Alignment to the Common Core State Standards for Mathematics

Grade 5

(*) Smart Start Review at beg. of book - good way to warm up the school year

(*) Readiness Quiz at macmillanmh.com good pre-test for grouping?

(*) Like "foldables" for notetaking

(*) Get ready to study helps teach students how to study.

(*) Not always focused on skills + drill - Conversations + practice

(*) Practice Isn't ?'s

Students will learn - very strong in all areas except fractions + measurement

a project of
The Charles A. Dana Center
at the University of Texas at Austin

Reviewed By: _____

Title of Instructional Materials: _____

Documenting Alignment to the Standards for Mathematical Practice

1. Make sense of problems and persevere in solving them.

Mathematically proficient students start by explaining to themselves the meaning of a problem and looking for entry points to its solution. They analyze givens, constraints, relationships, and goals. They make conjectures about the form and meaning of the solution and plan a solution pathway rather than simply jumping into a solution attempt. They consider analogous problems, and try special cases and simpler forms of the original problem in order to gain insight into its solution. They monitor and evaluate their progress and change course if necessary. Older students might, depending on the context of the problem, transform algebraic expressions or change the viewing window on their graphing calculator to get the information they need. Mathematically proficient students can explain correspondences between equations, verbal descriptions, tables, and graphs or draw diagrams of important features and relationships, graph data, and search for regularity or trends. Younger students might rely on using concrete objects or pictures to help conceptualize and solve a problem. Mathematically proficient students check their answers to problems using a different method, and they continually ask themselves, "Does this make sense?" They can understand the approaches of others to solving complex problems and identify correspondences between different approaches.

Opportunity to check the strategy

Awesome

Indicate the chapter(s), section(s), or page(s) reviewed.

2.6-3

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Each chapter has a 3 Problem solving lesson where problem solving is modeled. Students are shown entry points, strategies + ways to check

Overall Rating

1 — 2 — 3 — 4

Reviewed By: _____

Title of Instructional Materials: _____

Documenting Alignment to the Standards for Mathematical Practice

2. Reason abstractly and quantitatively.

Mathematically proficient students make sense of quantities and their relationships in problem situations. They bring two complementary abilities to bear on problems involving quantitative relationships: the ability to decontextualize—to abstract a given situation and represent it symbolically and manipulate the representing symbols as if they have a life of their own, without necessarily attending to their referents—and the ability to contextualize, to pause as needed during the manipulation process in order to probe into the referents for the symbols involved. Quantitative reasoning entails habits of creating a coherent representation of the problem at hand; considering the units involved; attending to the meaning of quantities, not just how to compute them; and knowing and flexibly using different properties of operations and objects.

Writing about their thinking

Indicate the chapter(s), section(s), or page(s) reviewed.

Ch 9-3
10-5

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Students given opportunity to analyze the strategy and to practice

Overall Rating

1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

Documenting Alignment to the Standards for Mathematical Practice

3. Construct viable arguments and critique the reasoning of others.

Mathematically proficient students understand and use stated assumptions, definitions, and previously established results in constructing arguments. They make conjectures and build a logical progression of statements to explore the truth of their conjectures. They are able to analyze situations by breaking them into cases, and can recognize and use counterexamples. They justify their conclusions, communicate them to others, and respond to the arguments of others. They reason inductively about data, making plausible arguments that take into account the context from which the data arose. Mathematically proficient students are also able to compare the effectiveness of two plausible arguments, distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in an argument—explain what it is. Elementary students can construct arguments using concrete referents such as objects, drawings, diagrams, and actions. Such arguments can make sense and be correct, even though they are not generalized or made formal until later grades. Later, students learn to determine domains to which an argument applies. Students at all grades can listen or read the arguments of others, decide whether they make sense, and ask useful questions to clarify or improve the arguments.

Writing asks students to justify their solutions

Games provide students the opportunity to practice & discuss their thinking

Students decide which is more reasonable & explain

Indicate the chapter(s), section(s), or page(s) reviewed.

Ch 10
Game Time pg 455

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Lo 10-10 - students asked to support their answer w/ a model

Overall Rating

1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

Documenting Alignment to the Standards for Mathematical Practice

4. Model with mathematics.

Mathematically proficient students can apply the mathematics they know to solve problems arising in everyday life, society, and the workplace. In early grades, this might be as simple as writing an addition equation to describe a situation. In middle grades, a student might apply proportional reasoning to plan a school event or analyze a problem in the community. By high school, a student might use geometry to solve a design problem or use a function to describe how one quantity of interest depends on another. Mathematically proficient students who can apply what they know are comfortable making assumptions and approximations to simplify a complicated situation, realizing that these may need revision later. They are able to identify important quantities in a practical situation and map their relationships using such tools as diagrams, two-way tables, graphs, flowcharts and formulas. They can analyze those relationships mathematically to draw conclusions. They routinely interpret their mathematical results in the context of the situation and reflect on whether the results make sense, possibly improving the model if it has not served its purpose.

Indicate the chapter(s), section(s), or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Overall Rating

Reviewed By: _____

Title of Instructional Materials: _____

Documenting Alignment to the Standards for Mathematical Practice

5. Use appropriate tools strategically.

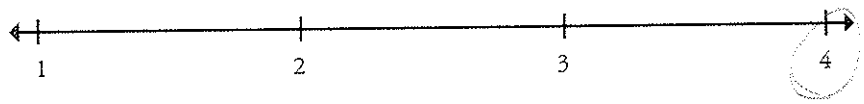
Mathematically proficient students consider the available tools when solving a mathematical problem. These tools might include pencil and paper, concrete models, a ruler, a protractor, a calculator, a spreadsheet, a computer algebra system, a statistical package, or dynamic geometry software. Proficient students are sufficiently familiar with tools appropriate for their grade or course to make sound decisions about when each of these tools might be helpful, recognizing both the insight to be gained and their limitations. For example, mathematically proficient high school students analyze graphs of functions and solutions generated using a graphing calculator. They detect possible errors by strategically using estimation and other mathematical knowledge. When making mathematical models, they know that technology can enable them to visualize the results of varying assumptions, explore consequences, and compare predictions with data. Mathematically proficient students at various grade levels are able to identify relevant external mathematical resources, such as digital content located on a website, and use them to pose or solve problems. They are able to use technological tools to explore and deepen their understanding of concepts.

Indicate the chapter(s), section(s), or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Overall Rating



Reviewed By: _____

Title of Instructional Materials: _____

Documenting Alignment to the Standards for Mathematical Practice

6. Attend to precision.

Mathematically proficient students try to communicate precisely to others. They try to use clear definitions in discussion with others and in their own reasoning. They state the meaning of the symbols they choose, including using the equal sign consistently and appropriately. They are careful about specifying units of measure, and labeling axes to clarify the correspondence with quantities in a problem. They calculate accurately and efficiently, express numerical answers with a degree of precision appropriate for the problem context. In the elementary grades, students give carefully formulated explanations to each other. By the time they reach high school they have learned to examine claims and make explicit use of definitions.

Vocabulary is reinforced throughout text + study guide

Indicate the chapter(s), section(s), or page(s) reviewed.

CH 1

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Models help students explain reasoning

Overall Rating

1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

Documenting Alignment to the Standards for Mathematical Practice

7. Look for and make use of structure.

Mathematically proficient students look closely to discern a pattern or structure. Young students, for example, might notice that three and seven more is the same amount as seven and three more, or they may sort a collection of shapes according to how many sides the shapes have. Later, students will see 7×8 equals the well remembered $7 \times 5 + 7 \times 3$, in preparation for learning about the distributive property. In the expression $x^2 + 9x + 14$, older students can see the 14 as 2×7 and the 9 as $2 + 7$. They recognize the significance of an existing line in a geometric figure and can use the strategy of drawing an auxiliary line for solving problems. They also can step back for an overview and shift perspective. They can see complicated things, such as some algebraic expressions, as single objects or as being composed of several objects. For example, they can see $5 - 3(x - y)^2$ as 5 minus a positive number times a square and use that to realize that its value cannot be more than 5 for any real numbers x and y.

Describes expressions & then develops understanding from there.
Students asked to evaluate expressions
Justify reasoning

Indicate the chapter(s), section(s), or page(s) reviewed.

Chapter 5 - Algebraic Expressions
pg 196 Solve a simpler problem strategy
3-2

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Use function tables
to 3-2 - distributive property

Overall Rating

1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

Documenting Alignment to the Standards for Mathematical Practice

8. Look for and express regularity in repeated reasoning.

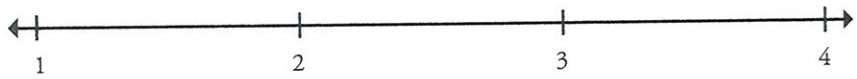
Mathematically proficient students notice if calculations are repeated, and look both for general methods and for shortcuts. Upper elementary students might notice when dividing 25 by 11 that they are repeating the same calculations over and over again, and conclude they have a repeating decimal. By paying attention to the calculation of slope as they repeatedly check whether points are on the line through (1, 2) with slope 3, middle school students might abstract the equation $(y - 2)/(x - 1) = 3$. Noticing the regularity in the way terms cancel when expanding $(x - 1)(x + 1)$, $(x - 1)(x^2 + x + 1)$, and $(x - 1)(x^3 + x2 + x + 1)$ might lead them to the general formula for the sum of a geometric series. As they work to solve a problem, mathematically proficient students maintain oversight of the process, while attending to the details. They continually evaluate the reasonableness of their intermediate results.

Indicate the chapter(s), section(s), or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Overall Rating



Reviewed By: _____

Title of Instructional Materials: _____

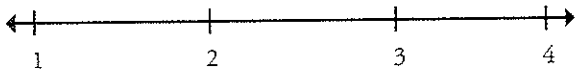
MATHEMATICS: GRADE 5 – OPERATIONS AND ALGEBRAIC THINKING – 5.OA

Write and interpret numerical expressions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.OA.1 Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** 5-7 Multiple approaches & models	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** Use of parentheses in algebraic expressions. Real world examples are analyzed - Convert °F to °C Extra Practice 5-7 **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

MATHEMATICS: GRADE 5 – OPERATIONS AND ALGEBRAIC THINKING – 5.OA

Write and interpret numerical expressions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.OA.2 Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. *For example, express the calculation "add 8 and 7, then multiply by 2" as 2 × (8 + 7). Recognize that 3 × (18932 + 921) is three times as large as 18932 + 921, without having to calculate the indicated sum or product.* **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas Skills and Procedures Mathematical Relationships **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 

Reviewed By: _____

Title of Instructional Materials: _____

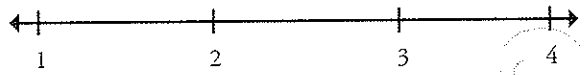
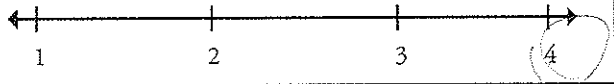
MATHEMATICS: GRADE 5 – OPERATIONS AND ALGEBRAIC THINKING – 5.OA

Analyze patterns and relationships.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.OA.3 Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane. *For example, given the rule "Add 3" and the starting number 0, and given the rule "Add 6" and the starting number 0, generate terms in the resulting sequences, and observe that the terms in one sequence are twice the corresponding terms in the other sequence. Explain informally why this is so.* **Indicate the chapter(s), section(s), and/or page(s) reviewed.** Ch 5	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

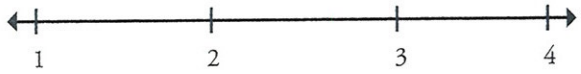
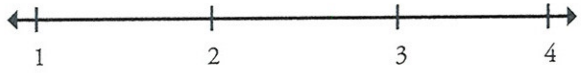
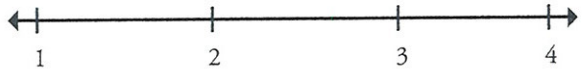
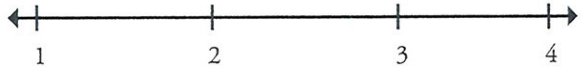
MATHEMATICS: GRADE 5 – NUMBER AND OPERATIONS IN BASE TEN – 5.NBT

Understand the place value system.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.NBT.1 Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left. Like the number lines Practice + Problem solving Real world examples Writing across curriculum **Indicate the chapter(s), section(s), and/or page(s) reviewed.** pg 20-21 Chapter 1 pages 16-52	Important Mathematical Ideas  Skills and Procedures Lots of practice Mathematical Relationships Number sense **Summary / Justification / Evidence** Chapter provides a nice balance between skill practice + problem solving **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 

Reviewed By: _____

Title of Instructional Materials: _____

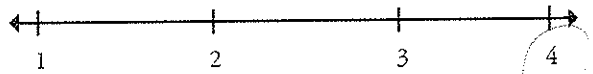
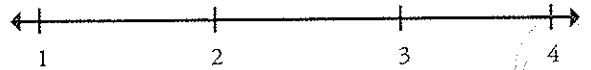
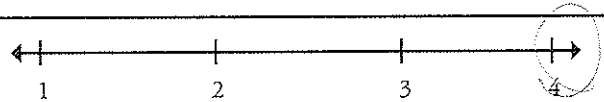
MATHEMATICS: GRADE 5 – NUMBER AND OPERATIONS IN BASE TEN – 5.NBT

Understand the place value system.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.NBT.2 Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** see pg 17	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 

Reviewed By: _____

Title of Instructional Materials: _____

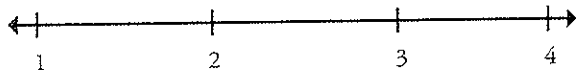
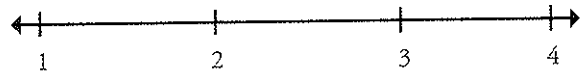
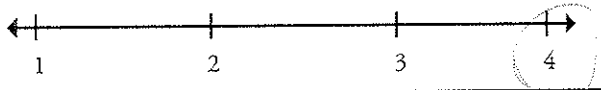
MATHEMATICS: GRADE 5 – NUMBER AND OPERATIONS IN BASE TEN – 5.NBT

Understand the place value system.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.NBT.3a 3. Read, write, and compare decimals to thousandths. a. Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g., 347.392 = 3 × 100 + 4 × 10 + 7 × 1 + 3 × (1/10) + 9 × (1/100) + 2 × (1/1000). Use models Problem Solving **Indicate the chapter(s), section(s), and/or page(s) reviewed.** 26 - 31 1-5 - Reading & Writing 1-6 - Comparing 1-7 Ordering	Important Mathematical Ideas  Skills and Procedures Mathematical Relationships  **Summary / Justification / Evidence** Nice development of concept **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 

Reviewed By: _____

Title of Instructional Materials: _____

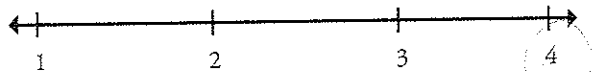
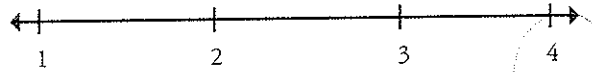
MATHEMATICS: GRADE 5 – NUMBER AND OPERATIONS IN BASE TEN – 5.NBT

Understand the place value system.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.NBT.3b 3. Read, write, and compare decimals to thousandths. b. Compare two decimals to thousandths based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons. **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas  Skills and Procedures Mathematical Relationships  **Summary / Justification / Evidence**
	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):
	Overall Rating 

Reviewed By: _____

Title of Instructional Materials: _____

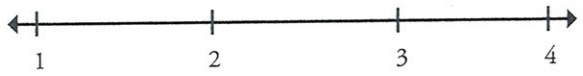
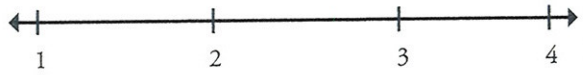
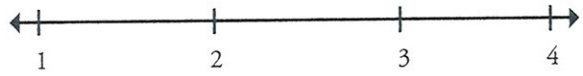
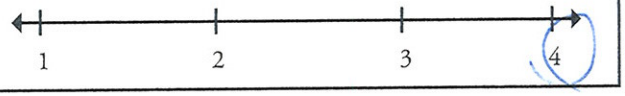
MATHEMATICS: GRADE 5 – NUMBER AND OPERATIONS IN BASE TEN – 5.NBT

Understand the place value system.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.NBT.4 Use place value understanding to round decimals to any place. **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas Skills and Procedures  Mathematical Relationships  **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating

Reviewed By: _____

Title of Instructional Materials: _____

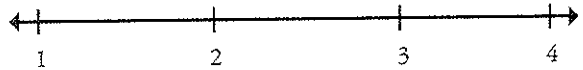
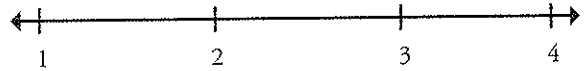
MATHEMATICS: GRADE 5 – NUMBER AND OPERATIONS IN BASE TEN – 5.NBT

Perform operations with multi-digit whole numbers and with decimals to hundredths.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.NBT.5 Fluently multiply multi-digit whole numbers using the standard algorithm. Problem Solving in many different situations. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** Pgs 116 - 145 Well developed Lots of practice + application	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary / Justification / Evidence** Demonstrates distributive property + algorithm Lots of skill practice and problem solving **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 

Reviewed By: _____

Title of Instructional Materials: _____

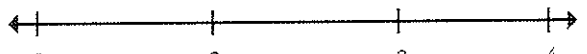
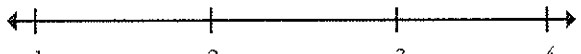
MATHEMATICS: GRADE 5 – NUMBER AND OPERATIONS IN BASE TEN – 5.NBT

Perform operations with multi-digit whole numbers and with decimals to hundredths.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.NBT.6 Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models. **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas Skills and Procedures  Mathematical Relationships  **Summary / Justification / Evidence**
	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):
	Overall Rating

Reviewed By: _____

Title of Instructional Materials: _____

MATHEMATICS: GRADE 5 – NUMBER AND OPERATIONS IN BASE TEN – 5.NBT

Perform operations with multi-digit whole numbers and with decimals to hundredths.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.NBT.7 Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas  Skills and Procedures Mathematical Relationships **Summary / Justification / Evidence**
	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):
	Overall Rating 

Reviewed By: _____

Title of Instructional Materials: _____

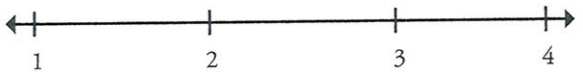
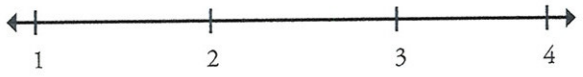
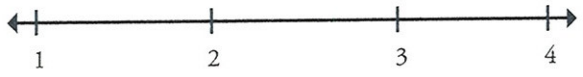
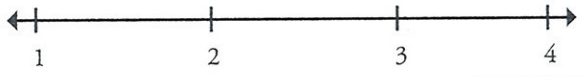
MATHEMATICS: GRADE 5 – NUMBER AND OPERATIONS–FRACTIONS – 5.NF

Use equivalent fractions as a strategy to add and subtract fractions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.NF.1 Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators. *For example, 2/3 + 5/4 = 8/12 + 15/12 = 23/12. (In general, a/b + c/d = (ad + bc)/bd.)* Number line Venn Diagram Across Curriculum **Indicate the chapter(s), section(s), and/or page(s) reviewed.** Chapter 8 - Develop Fraction Concepts Ch 9 - Factors + Multiples Ch 10	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 **4**

Reviewed By: _____

Title of Instructional Materials: _____

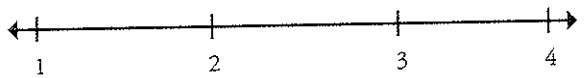
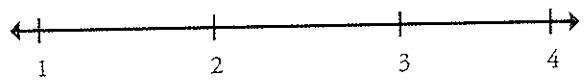
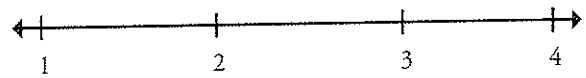
MATHEMATICS: GRADE 5 – NUMBER AND OPERATIONS–FRACTIONS – 5.NF

Use equivalent fractions as a strategy to add and subtract fractions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.NF.2 Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers. *For example, recognize an incorrect result 2/5 + 1/2 = 3/7, by observing that 3/7 < 1/2.* **Indicate the chapter(s), section(s), and/or page(s) reviewed.** Ch 8-10	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 

Reviewed By: _____

Title of Instructional Materials: _____

MATHEMATICS: GRADE 5 – NUMBER AND OPERATIONS–FRACTIONS – 5.NF

Apply and extend previous understandings of multiplication and division to multiply and divide fractions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.NF.3 Interpret a fraction as division of the numerator by the denominator ($a/b = a \div b$). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers, e.g., by using visual fraction models or equations to represent the problem. *For example, interpret 3/4 as the result of dividing 3 by 4, noting that 3/4 multiplied by 4 equals 3, and that when 3 wholes are shared equally among 4 people each person has a share of size 3/4. If 9 people want to share a 50-pound sack of rice equally by weight, how many pounds of rice should each person get? Between what two whole numbers does your answer lie?* **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating

Reviewed By: _____

Title of Instructional Materials: _____

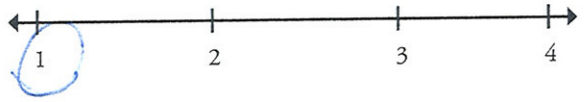
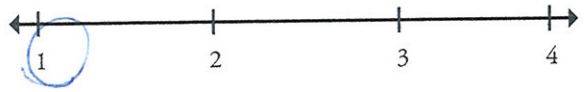
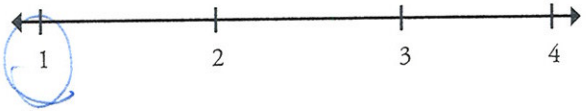
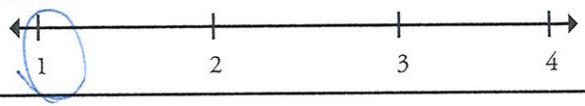
MATHEMATICS: GRADE 5 – NUMBER AND OPERATIONS – FRACTIONS – 5.NF

Apply and extend previous understandings of multiplication and division to multiply and divide fractions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.NF.4a 4. Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction. a. Interpret the product $(a/b) \times q$ as a parts of a partition of q into b equal parts; equivalently, as the result of a sequence of operations $a \times q \div b$. *For example, use a visual fraction model to show* $(2/3) \times 4 = 8/3$, *and create a story context for this equation. Do the same with* $(2/3) \times (4/5) = 8/15$. *(In general,* $(a/b) \times (c/d) = ac/bd$.*)* **Indicate the chapter(s), section(s), and/or page(s) reviewed.** 333-335 Fractions of Division 363 - Review	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

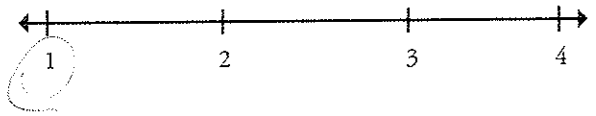
MATHEMATICS: GRADE 5 – NUMBER AND OPERATIONS – FRACTIONS – 5.NF

Apply and extend previous understandings of multiplication and division to multiply and divide fractions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.NF.4b 4. Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction. b. Find the area of a rectangle with fractional side lengths by tiling it with unit squares of the appropriate unit fraction side lengths, and show that the area is the same as would be found by multiplying the side lengths. Multiply fractional side lengths to find areas of rectangles, and represent fraction products as rectangular areas. This is on ISTEP, but not covered in book **Indicate the chapter(s), section(s), and/or page(s) reviewed.** IN10 - IN14	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary / Justification / Evidence** Doesn't cover multiplication of fractions by fractions or whole numbers with area
	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):
	Overall Rating 

Reviewed By: _____

Title of Instructional Materials: _____

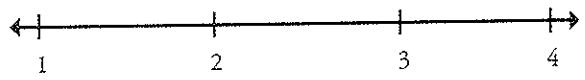
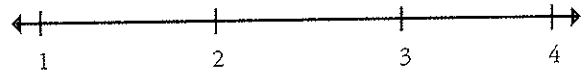
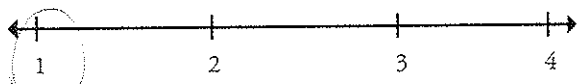
MATHEMATICS: GRADE 5 – NUMBER AND OPERATIONS – FRACTIONS – 5.NF

Apply and extend previous understandings of multiplication and division to multiply and divide fractions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.NF.5a 5. Interpret multiplication as scaling (resizing), by: a. Comparing the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication. **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas  Skills and Procedures Mathematical Relationships **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating

Reviewed By: _____

Title of Instructional Materials: _____

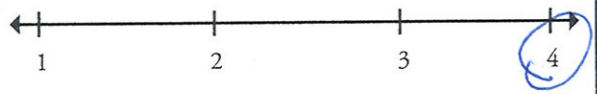
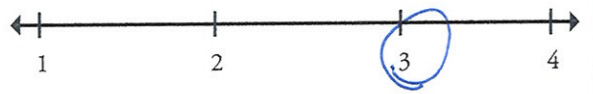
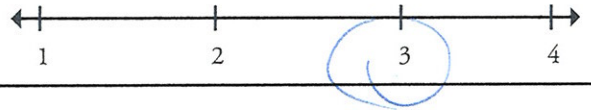
MATHEMATICS: GRADE 5 – NUMBER AND OPERATIONS – FRACTIONS – 5.NF

Apply and extend previous understandings of multiplication and division to multiply and divide fractions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.NF.5b 5. Interpret multiplication as scaling (resizing), by: b. Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and relating the principle of fraction equivalence $a/b = (n \times a)/(n \times b)$ to the effect of multiplying a/b by 1. **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas Skills and Procedures  Mathematical Relationships  **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 

Reviewed By: _____

Title of Instructional Materials: _____

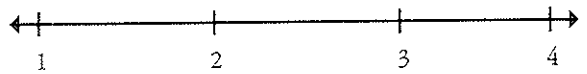
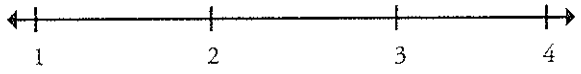
MATHEMATICS: GRADE 5 – NUMBER AND OPERATIONS – FRACTIONS – 5.NF

Apply and extend previous understandings of multiplication and division to multiply and divide fractions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.NF.6 *Solve real world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem.* **Indicate the chapter(s), section(s), and/or page(s) reviewed.** IN 10 - IN 14 Each chapter is 10-10	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships **Summary / Justification / Evidence**
	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any): Not "spiraled" and re-taught Not well developed
	Overall Rating 

Reviewed By: _____

Title of Instructional Materials: _____

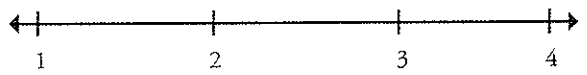
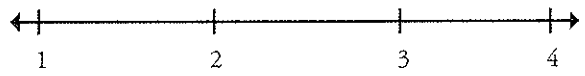
MATHEMATICS: GRADE 5 – NUMBER AND OPERATIONS – FRACTIONS – 5.NF

Apply and extend previous understandings of multiplication and division to multiply and divide fractions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.NF.7a 7. Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions.[1] a. Interpret division of a unit fraction by a non-zero whole number, and compute such quotients. *For example, create a story context for (1/3) ÷ 4, and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that (1/3) ÷ 4 = 1/12 because (1/12) × 4 = 1/3.* 1 Students able to multiply fractions in general can develop strategies to divide fractions in general, by reasoning about the relationship between multiplication and division. But division of a fraction by a fraction is not a requirement at this grade. **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas  Skills and Procedures Mathematical Relationships **Summary / Justification / Evidence**
	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):
	Overall Rating 

Reviewed By: _____

Title of Instructional Materials: _____

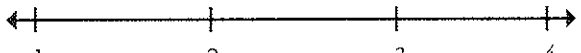
MATHEMATICS: GRADE 5 – NUMBER AND OPERATIONS – FRACTIONS – 5.NF

Apply and extend previous understandings of multiplication and division to multiply and divide fractions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.NF.7b 7. Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions.[1] b. Interpret division of a whole number by a unit fraction, and compute such quotients. *For example, create a story context for 4 ÷ (1/5), and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that 4 ÷ (1/5) = 20 because 20 × (1/5) = 4.* 1 Students able to multiply fractions in general can develop strategies to divide fractions in general, by reasoning about the relationship between multiplication and division. But division of a fraction by a fraction is not a requirement at this grade. **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas  Skills and Procedures Mathematical Relationships **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 

Reviewed By: _____

Title of Instructional Materials: _____

MATHEMATICS: GRADE 5 – NUMBER AND OPERATIONS – FRACTIONS – 5.NF

Apply and extend previous understandings of multiplication and division to multiply and divide fractions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.NF.7c 7. Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions.[1] c. Solve real world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions, e.g., by using visual fraction models and equations to represent the problem. *For example, how much chocolate will each person get if 3 people share 1/2 lb of chocolate equally? How many 1/3-cup servings are in 2 cups of raisins?* 1 Students able to multiply fractions in general can develop strategies to divide fractions in general, by reasoning about the relationship between multiplication and division. But division of a fraction by a fraction is not a requirement at this grade. **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas Skills and Procedures Mathematical Relationships **Summary / Justification / Evidence**
	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):
	Overall Rating 

Reviewed By: _____

Title of Instructional Materials: _____

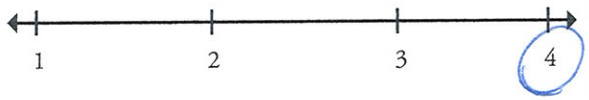
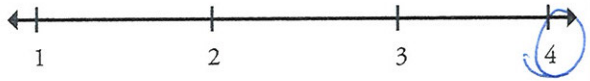
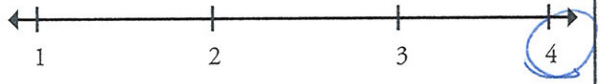
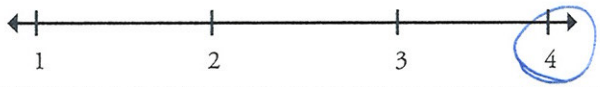
MATHEMATICS: GRADE 5 – MEASUREMENT AND DATA – 5.MD

Convert like measurement units within a given measurement system.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.MD.1 Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real world problems. feet ↔ inches pounds, ounces, tons hours, days, min metric elapsed time **Indicate the chapter(s), section(s), and/or page(s) reviewed.** Ch 11 Ch 12	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

MATHEMATICS: GRADE 5 – MEASUREMENT AND DATA – 5.MD

Represent and interpret data.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.MD.2 Make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Use operations on fractions for this grade to solve problems involving information presented in line plots. *For example, given different measurements of liquid in identical beakers, find the amount of liquid each beaker would contain if the total amount in all the beakers were redistributed equally.* **Indicate the chapter(s), section(s), and/or page(s) reviewed.** Ls 7-3 Chapter 7	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary / Justification / Evidence** Represent + interpret data in several ways to show relationships. **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 

Reviewed By: _____

Title of Instructional Materials: _____

MATHEMATICS: GRADE 5 – MEASUREMENT AND DATA – 5.MD

Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.MD.3a 3. Recognize volume as an attribute of solid figures and understand concepts of volume measurement. a. A cube with side length 1 unit, called a "unit cube," is said to have "one cubic unit" of volume, and can be used to measure volume. Problem Solving **Indicate the chapter(s), section(s), and/or page(s) reviewed.** Ch 14-4 14-5 14-6	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** Taught along w/ perimeter, area, surface area -> relationship **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

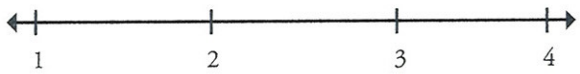
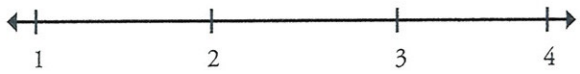
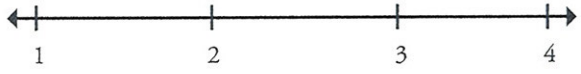
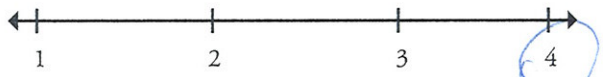
MATHEMATICS: GRADE 5 – MEASUREMENT AND DATA – 5.MD

Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.MD.3b 3. Recognize volume as an attribute of solid figures and understand concepts of volume measurement. b. A solid figure which can be packed without gaps or overlaps using *n* unit cubes is said to have a volume of *n* cubic units. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** See pg 38	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

MATHEMATICS: GRADE 5 – MEASUREMENT AND DATA – 5.MD

Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.MD.4 Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and improvised units. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** See pg 38	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 

Reviewed By: _____

Title of Instructional Materials: _____

MATHEMATICS: GRADE 5 – MEASUREMENT AND DATA – 5.MD

Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.MD.5a 5. Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume. a. Find the volume of a right rectangular prism with whole-number side lengths by packing it with unit cubes, and show that the volume is the same as would be found by multiplying the edge lengths, equivalently by multiplying the height by the area of the base. Represent threefold whole-number products as volumes, e.g., to represent the associative property of multiplication. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** See pg 38	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

MATHEMATICS: GRADE 5 – MEASUREMENT AND DATA – 5.MD

Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.MD.5b 5. Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume. b. Apply the formulas $V = l \times w \times h$ and $V = b \times h$ for rectangular prisms to find volumes of right rectangular prisms with whole-number edge lengths in the context of solving real world and mathematical problems. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** See pg 35	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

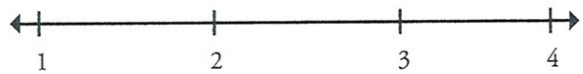
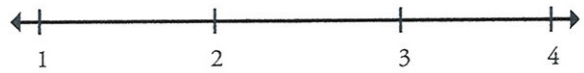
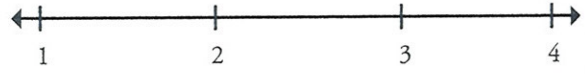
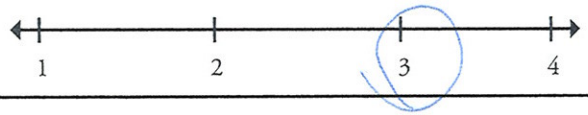
MATHEMATICS: GRADE 5 – MEASUREMENT AND DATA – 5.MD

Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.MD.5c 5. Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume. c. Recognize volume as additive. Find volumes of solid figures composed of two non-overlapping right rectangular prisms by adding the volumes of the non-overlapping parts, applying this technique to solve real world problems. **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence**
	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):
	Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

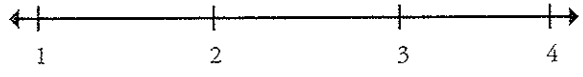
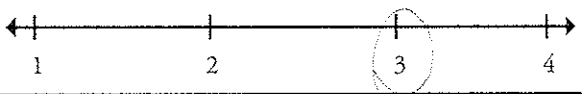
MATHEMATICS: GRADE 5 – GEOMETRY – 5.G

Graph points on the coordinate plane to solve real-world and mathematical problems.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.G.1 Use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates. Understand that the first number indicates how far to travel from the origin in the direction of one axis, and the second number indicates how far to travel in the direction of the second axis, with the convention that the names of the two axes and the coordinates correspond (e.g., x-axis and x-coordinate, y-axis and y-coordinate). **Indicate the chapter(s), section(s), and/or page(s) reviewed.** 250-252	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 

Reviewed By: _____

Title of Instructional Materials: _____

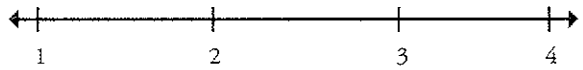
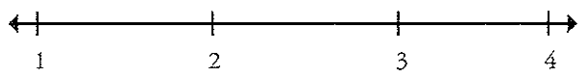
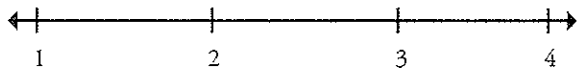
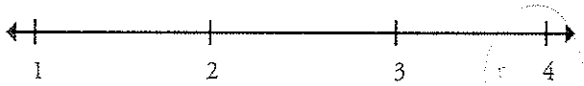
MATHEMATICS: GRADE 5 – GEOMETRY – 5.G

Classify two-dimensional figures into categories based on their properties.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.G.3 Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category. *For example, all rectangles have four right angles and squares are rectangles, so all squares have four right angles.* **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas Skills and Procedures Mathematical Relationships  **Summary / Justification / Evidence**
	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):
	Overall Rating 

Reviewed By: _____

Title of Instructional Materials: _____

MATHEMATICS: GRADE 5 – GEOMETRY – 5.G

Classify two-dimensional figures into categories based on their properties.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.G.4 Classify two-dimensional figures in a hierarchy based on properties. **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 

Reviewed By: [redacted]

Title of Instructional Materials: Math Connects - 5 McGraw Hill.

Documenting Alignment to the Standards for Mathematical Practice

1. Make sense of problems and persevere in solving them.

Mathematically proficient students start by explaining to themselves the meaning of a problem and looking for entry points to its solution. They analyze givens, constraints, relationships, and goals. They make conjectures about the form and meaning of the solution and plan a solution pathway rather than simply jumping into a solution attempt. They consider analogous problems, and try special cases and simpler forms of the original problem in order to gain insight into its solution. They monitor and evaluate their progress and change course if necessary. Older students might, depending on the context of the problem, transform algebraic expressions or change the viewing window on their graphing calculator to get the information they need. Mathematically proficient students can explain correspondences between equations, verbal descriptions, tables, and graphs or draw diagrams of important features and relationships, graph data, and search for regularity or trends. Younger students might rely on using concrete objects or pictures to help conceptualize and solve a problem. Mathematically proficient students check their answers to problems using a different method, and they continually ask themselves, "Does this make sense?" They can understand the approaches of others to solving complex problems and identify correspondences between different approaches.

c. 24
68
333

PS I
Real-World Examples Throughout

Indicate the chapter(s), section(s), or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Overall Rating

1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

Documenting Alignment to the Standards for Mathematical Practice

2. Reason abstractly and quantitatively.

Mathematically proficient students make sense of quantities and their relationships in problem situations. They bring two complementary abilities to bear on problems involving quantitative relationships: the ability to decontextualize—to abstract a given situation and represent it symbolically and manipulate the representing symbols as if they have a life of their own, without necessarily attending to their referents—and the ability to contextualize, to pause as needed during the manipulation process in order to probe into the referents for the symbols involved. Quantitative reasoning entails habits of creating a coherent representation of the problem at hand; considering the units involved; attending to the meaning of quantities, not just how to compute them; and knowing and flexibly using different properties of operations and objects.

88 HOT problems
116
162 Real World examples

p.482 P.S.I –
Apply & Adapt a variety of appropriate strategies

Indicate the chapter(s), section(s), or page(s) reviewed.

HOT Higher Order Thinking

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Overall Rating

Reviewed By: _____

Title of Instructional Materials: _____

Documenting Alignment to the Standards for Mathematical Practice

3. Construct viable arguments and critique the reasoning of others.

Mathematically proficient students understand and use stated assumptions, definitions, and previously established results in constructing arguments. They make conjectures and build a logical progression of statements to explore the truth of their conjectures. They are able to analyze situations by breaking them into cases, and can recognize and use counterexamples. They justify their conclusions, communicate them to others, and respond to the arguments of others. They reason inductively about data, making plausible arguments that take into account the context from which the data arose. Mathematically proficient students are also able to compare the effectiveness of two plausible arguments, distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in an argument—explain what it is. Elementary students can construct arguments using concrete referents such as objects, drawings, diagrams, and actions. Such arguments can make sense and be correct, even though they are not generalized or made formal until later grades. Later, students learn to determine domains to which an argument applies. Students at all grades can listen or read the arguments of others, decide whether they make sense, and ask useful questions to clarify or improve the arguments.

106
170
522

Real World
NOT.
P.S I

Indicate the chapter(s), section(s), or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Overall Rating

Reviewed By: _____

Title of Instructional Materials: _____

Documenting Alignment to the Standards for Mathematical Practice

4. Model with mathematics.

Mathematically proficient students can apply the mathematics they know to solve problems arising in everyday life, society, and the workplace. In early grades, this might be as simple as writing an addition equation to describe a situation. In middle grades, a student might apply proportional reasoning to plan a school event or analyze a problem in the community. By high school, a student might use geometry to solve a design problem or use a function to describe how one quantity of interest depends on another. Mathematically proficient students who can apply what they know are comfortable making assumptions and approximations to simplify a complicated situation, realizing that these may need revision later. They are able to identify important quantities in a practical situation and map their relationships using such tools as diagrams, two-way tables, graphs, flowcharts and formulas. They can analyze those relationships mathematically to draw conclusions. They routinely interpret their mathematical results in the context of the situation and reflect on whether the results make sense, possibly improving the model if it has not served its purpose.

Fraction & decimal models 24

78-decimal models

156-base 10 blocks

lines p. 482

p. 329 Graphs

Indicate the chapter(s), section(s), or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Overall Rating

Reviewed By: _____

Title of Instructional Materials: _____

Documenting Alignment to the Standards for Mathematical Practice

5. Use appropriate tools strategically.

Mathematically proficient students consider the available tools when solving a mathematical problem. These tools might include pencil and paper, concrete models, a ruler, a protractor, a calculator, a spreadsheet, a computer algebra system, a statistical package, or dynamic geometry software. Proficient students are sufficiently familiar with tools appropriate for their grade or course to make sound decisions about when each of these tools might be helpful, recognizing both the insight to be gained and their limitations. For example, mathematically proficient high school students analyze graphs of functions and solutions generated using a graphing calculator. They detect possible errors by strategically using estimation and other mathematical knowledge. When making mathematical models, they know that technology can enable them to visualize the results of varying assumptions, explore consequences, and compare predictions with data. Mathematically proficient students at various grade levels are able to identify relevant external mathematical resources, such as digital content located on a website, and use them to pose or solve problems. They are able to use technological tools to explore and deepen their understanding of concepts.

120 - draw a g. three centimeter cubes w/ math activity
168 - centimeter cubes w/ math activity
421 - fraction bars.

Indicate the chapter(s), section(s), or page(s) reviewed.

"Explore" activities
function tables p. 240

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Overall Rating

Reviewed By: _____

Title of Instructional Materials: _____

Documenting Alignment to the Standards for Mathematical Practice

6. Attend to precision.

Mathematically proficient students try to communicate precisely to others. They try to use clear definitions in discussion with others and in their own reasoning. They state the meaning of the symbols they choose, including using the equal sign consistently and appropriately. They are careful about specifying units of measure, and labeling axes to clarify the correspondence with quantities in a problem. They calculate accurately and efficiently, express numerical answers with a degree of precision appropriate for the problem context. In the elementary grades, students give carefully formulated explanations to each other. By the time they reach high school they have learned to examine claims and make explicit use of definitions.

6.1 - Rounding
7.4 - P.S.I w/ estimation
4.4.4 — Estimate to check

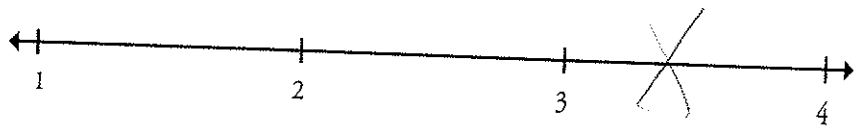
Throughout book.
I like spiral repetition of skills & consistent structure.

Indicate the chapter(s), section(s), or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Overall Rating



Reviewed By: _____

Title of Instructional Materials: _____

Documenting Alignment to the Standards for Mathematical Practice

7. Look for and make use of structure.

Mathematically proficient students look closely to discern a pattern or structure. Young students, for example, might notice that three and seven more is the same amount as seven and three more, or they may sort a collection of shapes according to how many sides the shapes have. Later, students will see 7×8 equals the well remembered $7 \times 5 + 7 \times 3$, in preparation for learning about the distributive property. In the expression $x^2 + 9x + 14$, older students can see the 14 as 2×7 and the 9 as $2 + 7$. They recognize the significance of an existing line in a geometric figure and can use the strategy of drawing an auxiliary line for solving problems. They also can step back for an overview and shift perspective. They can see complicated things, such as some algebraic expressions, as single objects or as being composed of several objects. For example, they can see $5 - 3(x - y)^2$ as 5 minus a positive number times a square and use that to realize that its value cannot be more than 5 for any real numbers x and y.

42 # line w/ ordering decimals. Walks through step-by-step.

Distributive property ← 108 218 → order of operations

Indicate the chapter(s), section(s), or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Overall Rating

Reviewed By: _____

Title of Instructional Materials: _____

Documenting Alignment to the Standards for Mathematical Practice

8. Look for and express regularity in repeated reasoning.

Mathematically proficient students notice if calculations are repeated, and look both for general methods and for shortcuts. Upper elementary students might notice when dividing 25 by 11 that they are repeating the same calculations over and over again, and conclude they have a repeating decimal. By paying attention to the calculation of slope as they repeatedly check whether points are on the line through (1, 2) with slope 3, middle school students might abstract the equation $(y - 2)/(x - 1) = 3$. Noticing the regularity in the way terms cancel when expanding $(x - 1)(x + 1)$, $(x - 1)(x^2 + x + 1)$, and $(x - 1)(x^3 + x2 + x + 1)$ might lead them to the general formula for the sum of a geometric series. As they work to solve a problem, mathematically proficient students maintain oversight of the process, while attending to the details. They continually evaluate the reasonableness of their intermediate results.

103 - multiplication patterns
149 - division patterns
210 - function tables

Indicate the chapter(s), section(s), or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Overall Rating

Reviewed By: _____

Title of Instructional Materials: _____

MATHEMATICS: GRADE 5 – OPERATIONS AND ALGEBRAIC THINKING – 5.OA

Write and interpret numerical expressions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.OA.1 Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols. 108-111 - distributive property 218-222 Order of op only 2 problems w/ parentheses?? **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

MATHEMATICS: GRADE 5 – OPERATIONS AND ALGEBRAIC THINKING – 5.OA

Write and interpret numerical expressions.

5.OA.2

Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. *For example, express the calculation "add 8 and 7, then multiply by 2" as 2 × (8 + 7). Recognize that 3 × (18932 + 921) is three times as large as 18932 + 921, without having to calculate the indicated sum or product.*

108-111 - Distributive Property ✓

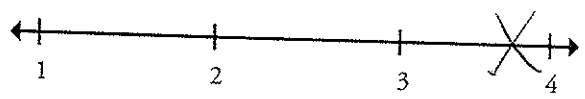
218-222

Did anyone see strong evidence?

Indicate the chapter(s), section(s), and/or page(s) reviewed.

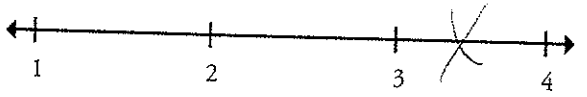
Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.

Important Mathematical Ideas



Skills and Procedures

Mathematical Relationships



Summary / Justification / Evidence

Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):

Overall Rating

Reviewed By: _____

Title of Instructional Materials: _____

MATHEMATICS: GRADE 5 – OPERATIONS AND ALGEBRAIC THINKING – 5.OA

Analyze patterns and relationships.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.OA.3 Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane. *For example, given the rule "Add 3" and the starting number 0, and given the rule "Add 6" and the starting number 0, generate terms in the resulting sequences, and observe that the terms in one sequence are twice the corresponding terms in the other sequence. Explain informally why this is so.* p. 254-257 – graphing ordered pairs. CCSS 5-8 Lesson 1 No function for patterns. ✓ patterns **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** I could make a case for it, but I don't think it's the strongest ch. 2 pairings. Overall Rating 1 2 3 4

Reviewed By: [redacted]

Title of Instructional Materials: Macmillan | McGraw Hill Math Connects

MATHEMATICS: GRADE 5 – MEASUREMENT AND DATA – 5.MD

Convert like measurement units within a given measurement system.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
5.MD.1 Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real world problems. Has lesson in CCSS supplement for 5.MD.5c but the lesson does not address the standard. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** 477-480, 486-495 517-521, 524-530 conversions (Standard + metric) CCSS - 62-65 5.MD.2 - line plots + fractions 630-635 Volume	Important Mathematical Ideas 1 — 2 — 3 — 4 Skills and Procedures 1 — 2 (too much skill work) — 3 — 4 Mathematical Relationships 1 — 2 (not much rigor) — 3 — 4 **Summary / Justification / Evidence** Problem solving not well developed - a lot of skill practice Standard addressed through examples but not developed in skills + problem solving practice **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** 5.MD.1 multi-step problem solving not well developed 5.MD.4 not well developed 5.MD.5a not developed 5.MD.5b V = BxH is missing. Problem solving not well developed 5.MD.5c missing Overall Rating 1 — 2 — 3 — 4

Reviewed By: [redacted]

Title of Instructional Materials: Macmillan/McGraw Hill Math Connects

MATHEMATICS: GRADE 5 – NUMBER AND OPERATIONS–FRACTIONS – 5.NF

Use equivalent fractions as a strategy to add and subtract fractions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.NF.1 Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators. *For example, 2/3 + 5/4 = 8/12 + 15/12 = 23/12. (In general, a/b + c/d = (ad + bc)/bd.)* **Indicate the chapter(s), section(s), and/or page(s) reviewed.** 432 – 443 +,- fractions and mixed #s 333 – 335 interpreting fractions as ÷ CCSS - 37 - 46 x fractions (whole #s & fract) dCSS - 47 Scaling CCSS - 37 - 51 x fract dCSS - 52 - 65 ÷ unit fract + whole #s	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** Good connections, applications & explorations **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** 5.NF.2 missing - use of fractional benchmarks, reasonableness, 2 answers 5.NF.4a - visual not used for mult 2 fract + whole # 5.NF.4b - missing 5.NF.5b - missing principle 2 fract eg (mult by $\frac{a}{a}$, 1) Overall Rating 1 2 2.1 3 4

Reviewed By: [redacted]

Title of Instructional Materials: Math Connects - 5
McGraw Hill

MATHEMATICS: GRADE 5 – GEOMETRY – 5.G

Graph points on the coordinate plane to solve real-world and mathematical problems.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.G.1 Use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates. Understand that the first number indicates how far to travel from the origin in the direction of one axis, and the second number indicates how far to travel in the direction of the second axis, with the convention that the names of the two axes and the coordinates correspond (e.g., x-axis and x-coordinate, y-axis and y-coordinate). **Indicate the chapter(s), section(s), and/or page(s) reviewed.** Ch. 6 p. 232-275 - well developed concepts - Ch 13 - graphing ideas expanded to geometry	Important Mathematical Ideas: 1 2 3 **X** 4 Skills and Procedures: 1 2 3 **X** 4 Mathematical Relationships: 1 2 3 **X** 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** possibly lacking investigations Overall Rating: 1 2 3 **X** 4

Reviewed By: [redacted]

Title of Instructional Materials: Math Connects - Gr 5

MATHEMATICS: GRADE 5 – GEOMETRY – 5.G

Graph points on the coordinate plane to solve real-world and mathematical problems.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.G.2 Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** See 5.G.1	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 4

Reviewed By: [redacted]

Title of Instructional Materials: Math Connects

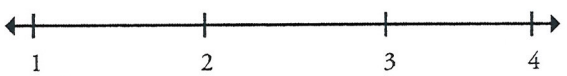
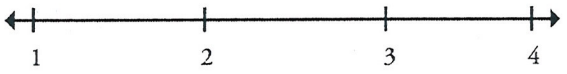
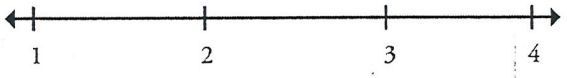
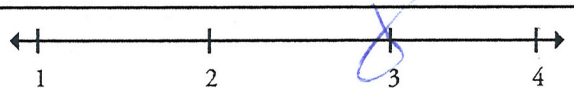
MATHEMATICS: GRADE 5 – GEOMETRY – 5.G

Classify two-dimensional figures into categories based on their properties.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.G.3 Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category. *For example, all rectangles have four right angles and squares are rectangles, so all squares have four right angles.* **Indicate the chapter(s), section(s), and/or page(s) reviewed.** Ch 13 p. 554-578 5 lessons	Important Mathematical Ideas: 1 2 **3** 4 Skills and Procedures: 1 2 **3** 4 Mathematical Relationships: 1 2 **3** 4 **Summary / Justification / Evidence** lacking rigor + depth - only three lessons directly related to 2-D figures **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating: 1 2 **3** 4

Reviewed By: _____

Title of Instructional Materials: _____

MATHEMATICS: GRADE 5 – GEOMETRY – 5.G

Classify two-dimensional figures into categories based on their properties.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.G.4 Classify two-dimensional figures in a hierarchy based on properties. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** See 5.G.3	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 

Reviewed By: [redacted]

Title of Instructional Materials: ~~Prentice Hall Mathematics~~ Math ~~Course~~ Connects

MATHEMATICS: GRADE 5 – GEOMETRY – 5.G

Graph points on the coordinate plane to solve real-world and mathematical problems.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.G.1 Use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates. Understand that the first number indicates how far to travel from the origin in the direction of one axis, and the second number indicates how far to travel in the direction of the second axis, with the convention that the names of the two axes and the coordinates correspond (e.g., x-axis and x-coordinate, y-axis and y-coordinate). x-axis 250-252 y 254-257 (graphing functions) 270 **Indicate the chapter(s), section(s), and/or page(s) reviewed.** ~~Chapter 13 551~~ 6-4 Chapter 6	Important Mathematical Ideas: 1 2 3 4 (✓ at 4) Skills and Procedures: 1 2 3 4 (✓ at 3) Mathematical Relationships: 1 2 3 4 (✓ at 2) **Summary / Justification / Evidence** only a few pages on this **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating: 1 2 3 4 (0 at 3)

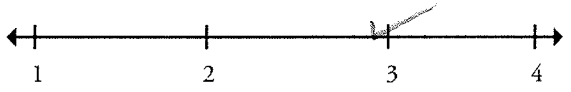
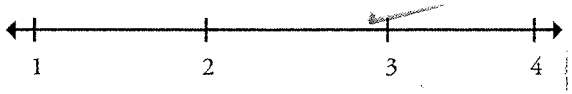
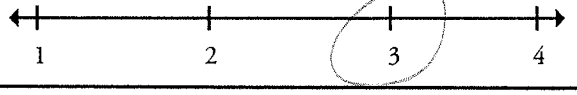
Chapter test study guides & review

ISTEP+ practice

Reviewed By: _____

Title of Instructional Materials: _____

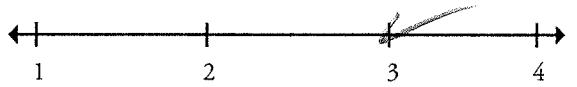
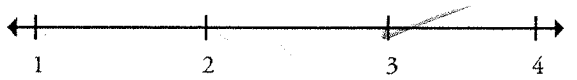
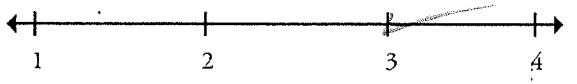
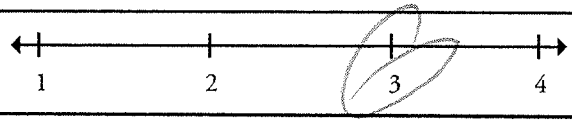
MATHEMATICS: GRADE 5 – GEOMETRY – 5.G

Graph points on the coordinate plane to solve real-world and mathematical problems.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.G.2 Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** Ch 6	Important Mathematical Ideas Skills and Procedures  Mathematical Relationships  **Summary / Justification / Evidence** Word relationships **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** (not much practice) Overall Rating 

Reviewed By: _____

Title of Instructional Materials: _____

MATHEMATICS: GRADE 5 – GEOMETRY – 5.G

Classify two-dimensional figures into categories based on their properties.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.G.3 Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category. *For example, all rectangles have four right angles and squares are rectangles, so all squares have four right angles.* **Indicate the chapter(s), section(s), and/or page(s) reviewed.** Ch 13 p 554 557 definitions 558 " 560 " * 571	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary / Justification / Evidence** great definitions **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 

Reviewed By: _____

Title of Instructional Materials: _____

MATHEMATICS: GRADE 5 – GEOMETRY – 5.G

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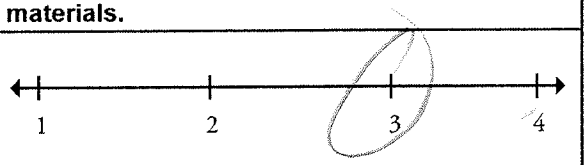
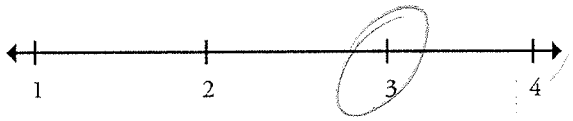
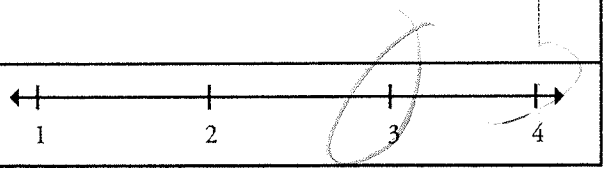
5.G.4 Classify two-dimensional figures in a hierarchy based on properties. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** ch 13	Important Mathematical Ideas  Skills and Procedures Mathematical Relationships  **Summary / Justification / Evidence** good definition + practice **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 

Mathematical Relationships: Understanding the scoring

	Superficially Developed ← → Well Developed	
Development	1 2 3 4	
	Mathematical relationships are not evident, and mathematics appears as a series of discrete skills and ideas.	Mathematical relationships are evident in such a way as to build understanding of mathematics as a unified whole.
Connections	1 2 3 4	
	Mathematical relationships are not required of students or are used primarily to provide a context for the practice of skills or procedures — words wrapped around drill.	Mathematical relationships are integrated with important mathematical ideas, and are integral in required activities, problems, and applications.
Rigor and Depth	1 2 3 4	
	Mathematical relationships require the use of skills and procedures, but rarely require the use of any important mathematical ideas or connections outside mathematics.	Mathematical relationships require the broad use of mathematics and integrate the need for important mathematical ideas, skills, and procedures, as well as connections outside mathematics.

Reviewed By: [redacted]

Title of Instructional Materials: Math Connects (5)

Documenting Alignment to the Standards for Mathematical Practice

1. Make sense of problems and persevere in solving them.

Mathematically proficient students start by explaining to themselves the meaning of a problem and looking for entry points to its solution. They analyze givens, constraints, relationships, and goals. They make conjectures about the form and meaning of the solution and plan a solution pathway rather than simply jumping into a solution attempt. They consider analogous problems, and try special cases and simpler forms of the original problem in order to gain insight into its solution. They monitor and evaluate their progress and change course if necessary. Older students might, depending on the context of the problem, transform algebraic expressions or change the viewing window on their graphing calculator to get the information they need. Mathematically proficient students can explain correspondences between equations, verbal descriptions, tables, and graphs or draw diagrams of important features and relationships, graph data, and search for regularity or trends. Younger students might rely on using concrete objects or pictures to help conceptualize and solve a problem. Mathematically proficient students check their answers to problems using a different method, and they continually ask themselves, "Does this make sense?" They can understand the approaches of others to solving complex problems and identify correspondences between different approaches.

Indicate the chapter(s), section(s), or page(s) reviewed.

- pg. 180 - 181
- pg. 333 - 335
- pg 248-249

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Throughout the text there are multiple opportunities for students to apply concepts taught in problem solving investigations.

Overall Rating

1 — 2 — 3 — 4

Reviewed By: [redacted]

Title of Instructional Materials: Math Connects (5)

Documenting Alignment to the Standards for Mathematical Practice

2. Reason abstractly and quantitatively.

Mathematically proficient students make sense of quantities and their relationships in problem situations. They bring two complementary abilities to bear on problems involving quantitative relationships: the ability to decontextualize—to abstract a given situation and represent it symbolically and manipulate the representing symbols as if they have a life of their own, without necessarily attending to their referents—and the ability to contextualize, to pause as needed during the manipulation process in order to probe into the referents for the symbols involved. Quantitative reasoning entails habits of creating a coherent representation of the problem at hand; considering the units involved; attending to the meaning of quantities, not just how to compute them; and knowing and flexibly using different properties of operations and objects.

Indicate the chapter(s), section(s), or page(s) reviewed.

pgs. 88-91 - Real World, H.O.T.
85-152-155 - " "
pg. 388-353 " "

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Text continually asks students to reason, specifically on H.O.T. problems

Overall Rating

1 2 3 4

[redacted]

Reviewed By: [redacted]

Title of Instructional Materials: Math Connects (5)

Documenting Alignment to the Standards for Mathematical Practice

3. Construct viable arguments and critique the reasoning of others.

Mathematically proficient students understand and use stated assumptions, definitions, and previously established results in constructing arguments. They make conjectures and build a logical progression of statements to explore the truth of their conjectures. They are able to analyze situations by breaking them into cases, and can recognize and use counterexamples. They justify their conclusions, communicate them to others, and respond to the arguments of others. They reason inductively about data, making plausible arguments that take into account the context from which the data arose. Mathematically proficient students are also able to compare the effectiveness of two plausible arguments, distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in an argument—explain what it is. Elementary students can construct arguments using concrete referents such as objects, drawings, diagrams, and actions. Such arguments can make sense and be correct, even though they are not generalized or made formal until later grades. Later, students learn to determine domains to which an argument applies. Students at all grades can listen or read the arguments of others, decide whether they make sense, and ask useful questions to clarify or improve the arguments.

Indicate the chapter(s), section(s), or page(s) reviewed.

pg. 136-137 (working in Math)
pg. 172 - (working in Math)
pg. 522-523

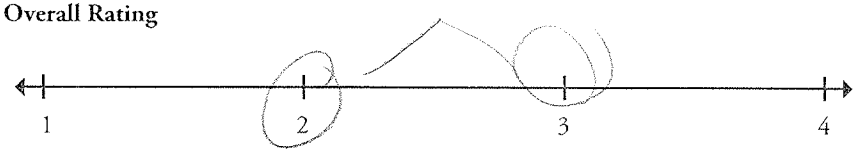
Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

✓

Summary/Justification/Evidence

Text provides sufficient practice for applying logic + reasoning, but lacks formal teaching of how to reason. (possibly not necessary)

Overall Rating



Reviewed By: [redacted]

Title of Instructional Materials: MCCS

Documenting Alignment to the Standards for Mathematical Practice

4. Model with mathematics.

Mathematically proficient students can apply the mathematics they know to solve problems arising in everyday life, society, and the workplace. In early grades, this might be as simple as writing an addition equation to describe a situation. In middle grades, a student might apply proportional reasoning to plan a school event or analyze a problem in the community. By high school, a student might use geometry to solve a design problem or use a function to describe how one quantity of interest depends on another. Mathematically proficient students who can apply what they know are comfortable making assumptions and approximations to simplify a complicated situation, realizing that these may need revision later. They are able to identify important quantities in a practical situation and map their relationships using such tools as diagrams, two-way tables, graphs, flowcharts and formulas. They can analyze those relationships mathematically to draw conclusions. They routinely interpret their mathematical results in the context of the situation and reflect on whether the results make sense, possibly improving the model if it has not served its purpose.

Indicate the chapter(s), section(s), or page(s) reviewed.

pg. 426-425
pg. 436-438 > Explore fractions
pg. 515-516 - explore measurement

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Text provides more than sufficient opportunities to solve real, everyday problems. Each lesson has real world examples

Overall Rating

1 . . 2 . . 3 . 4

[redacted]

Reviewed By: [redacted]

Title of Instructional Materials: MC(5)

Documenting Alignment to the Standards for Mathematical Practice

5. Use appropriate tools strategically.

Mathematically proficient students consider the available tools when solving a mathematical problem. These tools might include pencil and paper, concrete models, a ruler, a protractor, a calculator, a spreadsheet, a computer algebra system, a statistical package, or dynamic geometry software. Proficient students are sufficiently familiar with tools appropriate for their grade or course to make sound decisions about when each of these tools might be helpful, recognizing both the insight to be gained and their limitations. For example, mathematically proficient high school students analyze graphs of functions and solutions generated using a graphing calculator. They detect possible errors by strategically using estimation and other mathematical knowledge. When making mathematical models, they know that technology can enable them to visualize the results of varying assumptions, explore consequences, and compare predictions with data. Mathematically proficient students at various grade levels are able to identify relevant external mathematical resources, such as digital content located on a website, and use them to pose or solve problems. They are able to use technological tools to explore and deepen their understanding of concepts.

Indicate the chapter(s), section(s), or page(s) reviewed.

pg. 254-257
pg. 168-169 Explore

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Uses paper + pencil, ruler, calculator when necessary. Provides many opportunities for models.

Overall Rating

1 2 3 4

[redacted]

Reviewed By: [redacted]

Title of Instructional Materials: MC(5)

Documenting Alignment to the Standards for Mathematical Practice

6. Attend to precision.

Mathematically proficient students try to communicate precisely to others. They try to use clear definitions in discussion with others and in their own reasoning. They state the meaning of the symbols they choose, including using the equal sign consistently and appropriately. They are careful about specifying units of measure, and labeling axes to clarify the correspondence with quantities in a problem. They calculate accurately and efficiently, express numerical answers with a degree of precision appropriate for the problem context. In the elementary grades, students give carefully formulated explanations to each other. By the time they reach high school they have learned to examine claims and make explicit use of definitions.

Indicate the chapter(s), section(s), or page(s) reviewed.

- 7.5, 444-446
- HOT problems → "Explain your reasoning"

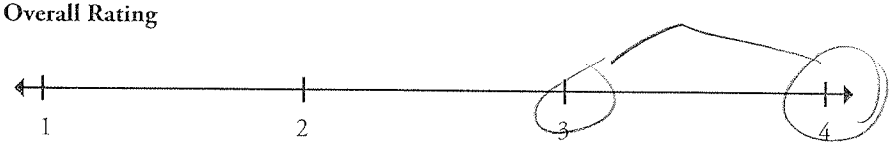
Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Provides opportunities for student to attend to precision.

* How do students justify – teacher support [redacted]

Overall Rating



Reviewed By: [redacted]

Title of Instructional Materials: [illegible]

Documenting Alignment to the Standards for Mathematical Practice

7. Look for and make use of structure.

Mathematically proficient students look closely to discern a pattern or structure. Young students, for example, might notice that three and seven more is the same amount as seven and three more, or they may sort a collection of shapes according to how many sides the shapes have. Later, students will see 7×8 equals the well remembered $7 \times 5 + 7 \times 3$, in preparation for learning about the distributive property. In the expression $x^2 + 9x + 14$, older students can see the 14 as 2×7 and the 9 as $2 + 7$. They recognize the significance of an existing line in a geometric figure and can use the strategy of drawing an auxiliary line for solving problems. They also can step back for an overview and shift perspective. They can see complicated things, such as some algebraic expressions, as single objects or as being composed of several objects. For example, they can see $5 - 3(x - y)^2$ as 5 minus a positive number times a square and use that to realize that its value cannot be more than 5 for any real numbers x and y.

Indicate the chapter(s), section(s), or page(s) reviewed.

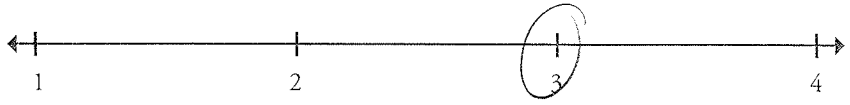
pp. 108-111 (Dist. prop.)
pp. 126-129 (Mult. prop.)

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

+Concepts are taught.
+Sketchy applications w/ fractions (long-layover 5 chapters)

Overall Rating



[redacted]

Reviewed By: [redacted]

Title of Instructional Materials: MC(5)

Documenting Alignment to the Standards for Mathematical Practice

8. Look for and express regularity in repeated reasoning.

Mathematically proficient students notice if calculations are repeated, and look both for general methods and for shortcuts. Upper elementary students might notice when dividing 25 by 11 that they are repeating the same calculations over and over again, and conclude they have a repeating decimal. By paying attention to the calculation of slope as they repeatedly check whether points are on the line through (1, 2) with slope 3, middle school students might abstract the equation $(y - 2)/(x - 1) = 3$. Noticing the regularity in the way terms cancel when expanding $(x - 1)(x + 1)$, $(x - 1)(x^2 + x + 1)$, and $(x - 1)(x^3 + x2 + x + 1)$ might lead them to the general formula for the sum of a geometric series. As they work to solve a problem, mathematically proficient students maintain oversight of the process, while attending to the details. They continually evaluate the reasonableness of their intermediate results.

Indicate the chapter(s), section(s), or page(s) reviewed.

pgs. 177-181 repeated division patterns
pgs. 103-105 " multiplication "

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Concepts taught
→ repeated division?
→ not continually practiced and shown throughout text

Overall Rating

1 2 3 4

Reviewed By: [redacted]

Title of Instructional Materials: Math Connects (5)

MATHEMATICS: GRADE 5 – OPERATIONS AND ALGEBRAIC THINKING – 5.OA

Write and interpret numerical expressions.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
5.OA.1 Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** Pg. 218-222 - Order of Op. Pg 108 - Dist. property	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** They are presented in real world application but taught in the specific lesson. Not connected **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 4

Reviewed By: [redacted]

Title of Instructional Materials: FC (5)

MATHEMATICS: GRADE 5 – OPERATIONS AND ALGEBRAIC THINKING – 5.OA

Write and interpret numerical expressions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.OA.2 Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. *For example, express the calculation "add 8 and 7, then multiply by 2" as 2 × (8 + 7). Recognize that 3 × (18932 + 921) is three times as large as 18932 + 921, without having to calculate the indicated sum or product.* **Indicate the chapter(s), section(s), and/or page(s) reviewed.** See previous page	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 4

Reviewed By: [redacted]

Title of Instructional Materials: MCCSS

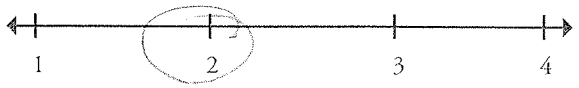
MATHEMATICS: GRADE 5 – OPERATIONS AND ALGEBRAIC THINKING – 5.OA

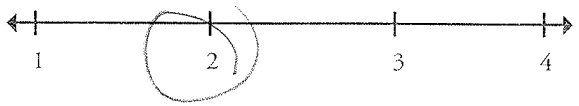
Analyze patterns and relationships.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
5.OA.3 Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane. *For example, given the rule "Add 3" and the starting number 0, and given the rule "Add 6" and the starting number 0, generate terms in the resulting sequences, and observe that the terms in one sequence are twice the corresponding terms in the other sequence. Explain informally why this is so.* **Indicate the chapter(s), section(s), and/or page(s) reviewed.** CCS 5-8 pg 254 - 257 - Ordered Pairs	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** Supplemental material provides specific real-world example w/ logical reasoning **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 4

Reviewed By: [redacted]

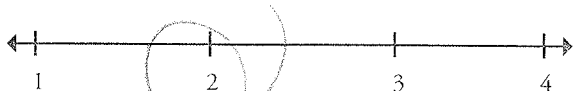
Title of Instructional Materials: MC(5)

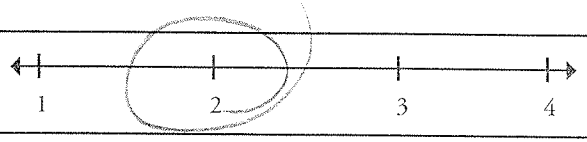
MATHEMATICS: GRADE 5 – NUMBER AND OPERATIONS IN BASE TEN – 5.NBT





Understand the place value system.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
5.NBT.1 Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left.	Important Mathematical Ideas: 1 2 3 4 Skills and Procedures: 1 2 3 4 Mathematical Relationships: 1 2 3 4 **Summary / Justification / Evidence** These lessons do not necessarily address standard as much as it does recognizing this
Indicate the chapter(s), section(s), and/or page(s) reviewed. pg. 17-19 pg. 32-35 → Place value	**Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** * However, have noticed elsewhere pg. 103
	Overall Rating: 1 2 3 4





Reviewed By: [redacted]

Title of Instructional Materials: HC (5)

MATHEMATICS: GRADE 5 – NUMBER AND OPERATIONS IN BASE TEN – 5.NBT

Understand the place value system.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.NBT.2 Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** pg. 103-105 pgs. 149-151 CCSS 9-11	Important Mathematical Ideas: 1 2 3 **4** Skills and Procedures: 1 2 3 **4** Mathematical Relationships: 1 2 **3** 4 **Summary / Justification / Evidence** Standard is taught w/ connectivity and logical reasoning. I did not understand connection in text timeline **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating: 1 2 3 **4**

Reviewed By: [redacted]

Title of Instructional Materials: HCPSS

MATHEMATICS: GRADE 5 – NUMBER AND OPERATIONS IN BASE TEN – 5.NBT

Understand the place value system.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.NBT.3a 3. Read, write, and compare decimals to thousandths. a. Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g., 347.392 = 3 × 100 + 4 × 10 + 7 × 1 + 3 × (1/10) + 9 × (1/100) + 2 × (1/1000). **Indicate the chapter(s), section(s), and/or page(s) reviewed.** pg. 26-29 pg. 52-55 pgs. 42-44	Important Mathematical Ideas: 1 2 3 **4** Skills and Procedures: 1 2 3 **4** Mathematical Relationships: 1 2 3 **4** **Summary / Justification / Evidence** Provides ample & sufficient reasoning w/ logical concepts **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating: 1 2 3 **4**

Reviewed By: [redacted]

Title of Instructional Materials: MC(5)

MATHEMATICS: GRADE 5 – NUMBER AND OPERATIONS IN BASE TEN – 5.NBT

Understand the place value system.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
5.NBT.3b 3. Read, write, and compare decimals to thousandths. b. Compare two decimals to thousandths based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** pg. 36-39 pg. 42-46	Important Mathematical Ideas: 1 2 3 **4** Skills and Procedures: 1 2 3 **4** Mathematical Relationships: 1 2 3 **4** **Summary / Justification / Evidence** See HOT Problems & Real world examples **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating: 1 2 3 **4**

Reviewed By: [redacted]

Title of Instructional Materials: MC(5)

MATHEMATICS: GRADE 5 – NUMBER AND OPERATIONS IN BASE TEN – 5.NBT

Understand the place value system.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.NBT.4 Use place value understanding to round decimals to any place. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** pg. 61-63	Important Mathematical Ideas 1 2 3 **4** Skills and Procedures 1 2 3 **4** Mathematical Relationships 1 2 3 **4** **Summary / Justification / Evidence** HOT Problems & Real world Examples **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 **4**

Reviewed By: [redacted]

Title of Instructional Materials: (MC) 5

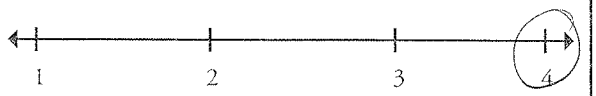
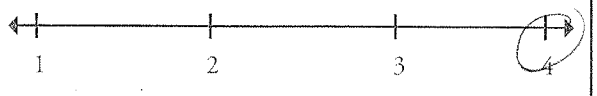
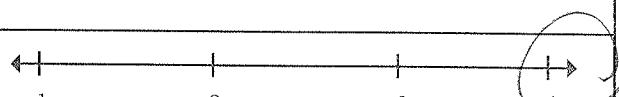
MATHEMATICS: GRADE 5 – NUMBER AND OPERATIONS IN BASE TEN – 5.NBT

Perform operations with multi-digit whole numbers and with decimals to hundredths.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.NBT.5 Fluently multiply multi-digit whole numbers using the standard algorithm. (contradicts CA Dana Center rubric) **Indicate the chapter(s), section(s), and/or page(s) reviewed.** pg. 116-156 — pg. 122-124 — multi pg. 126-129 — pg. 132-135 ✓	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** Real world examples and HOT problems **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 4

Reviewed By: [redacted]

Title of Instructional Materials: MCC(5)

MATHEMATICS: GRADE 5 – NUMBER AND OPERATIONS IN BASE TEN – 5.NBT

Perform operations with multi-digit whole numbers and with decimals to hundredths.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
5.NBT.6 Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** pg. 145-164 pg. 168-176	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships **Summary / Justification / Evidence** Covers standard in depth using multiple models **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 

Reviewed By: [redacted]

Title of Instructional Materials: [redacted] 4th(5)

MATHEMATICS: GRADE 5 – NUMBER AND OPERATIONS IN BASE TEN – 5.NBT

Perform operations with multi-digit whole numbers and with decimals to hundredths.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.NBT.7 Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** CCSS 12-36 (Supplement) pgs. 64-67 pgs. 78-79 pgs. 86-82	Important Mathematical Ideas: 1 2 3 **4** Skills and Procedures: 1 2 3 **4** Mathematical Relationships: 1 2 3 **4** **Summary / Justification / Evidence** Follows logical sequence. Shows connections between concepts. Most developed in NBT domain **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating: 1 2 3 **4**

Reviewed By: [redacted]

Title of Instructional Materials: HC(S)

MATHEMATICS: GRADE 5 – NUMBER AND OPERATIONS–FRACTIONS – 5.NF

Use equivalent fractions as a strategy to add and subtract fractions.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
5.NF.1 Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators. *For example, 2/3 + 5/4 = 8/12 + 15/12 = 23/12. (In general, a/b + c/d = (ad + bc)/bd.)* **Indicate the chapter(s), section(s), and/or page(s) reviewed.** pg. 432-441 pg. 448-454 pg. 458-461	Important Mathematical Ideas: 1 2 3 4 Skills and Procedures: 1 2 3 4 Mathematical Relationships: 1 2 3 4 **Summary / Justification / Evidence** Provides thorough explanation in logical sequence. + Uses LCD not cross-multiplying **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating: 1 2 3 4

Reviewed By: [redacted]

Title of Instructional Materials: MC(5)

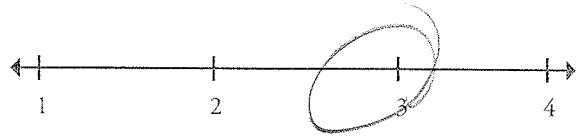
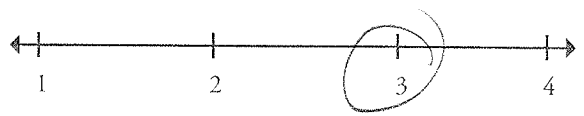
MATHEMATICS: GRADE 5 – NUMBER AND OPERATIONS–FRACTIONS – 5.NF

Use equivalent fractions as a strategy to add and subtract fractions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.NF.2 Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers. *For example, recognize an incorrect result 2/5 + 1/2 = 3/7, by observing that 3/7 < 1/2.* Not in text Teacher cue/understanding **Indicate the chapter(s), section(s), and/or page(s) reviewed.** pgs. 424-441 pgs. 444-446 pg 448 → check for reasonableness	Important Mathematical Ideas: 1 2 3 **4** Skills and Procedures: 1 2 3 **4** Mathematical Relationships: 1 2 3 **4** **Summary / Justification / Evidence** Word problems - all examples of concepts are used in word problems **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating: 1 2 3 **4**

Reviewed By: [redacted]

Title of Instructional Materials: MC(5)

MATHEMATICS: GRADE 5 – NUMBER AND OPERATIONS–FRACTIONS – 5.NF

Apply and extend previous understandings of multiplication and division to multiply and divide fractions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.NF.3 Interpret a fraction as division of the numerator by the denominator ($a/b = a \div b$). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers, e.g., by using visual fraction models or equations to represent the problem. *For example, interpret 3/4 as the result of dividing 3 by 4, noting that 3/4 multiplied by 4 equals 3, and that when 3 wholes are shared equally among 4 people each person has a share of size 3/4. If 9 people want to share a 50-pound sack of rice equally by weight, how many pounds of rice should each person get? Between what two whole numbers does your answer lie?* **Indicate the chapter(s), section(s), and/or page(s) reviewed.** pgs. 333-342	Important Mathematical Ideas Skills and Procedures  Mathematical Relationships  **Summary / Justification / Evidence** Concept is introduced late in the text but is explained adequately. **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating

Reviewed By: [redacted]

Title of Instructional Materials: 4th (5)

MATHEMATICS: GRADE 5 – NUMBER AND OPERATIONS – FRACTIONS – 5.NF

Apply and extend previous understandings of multiplication and division to multiply and divide fractions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.NF.4a 4. Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction. a. Interpret the product $(a/b) \times q$ as a parts of a partition of q into b equal parts; equivalently, as the result of a sequence of operations $a \times q \div b$. *For example, use a visual fraction model to show (2/3) × 4 = 8/3, and create a story context for this equation. Do the same with (2/3) × (4/5) = 8/15. (In general, (a/b) × (c/d) = ac/bd.)* **Indicate the chapter(s), section(s), and/or page(s) reviewed.** CCSS pg. 37-46	Important Mathematical Ideas 1 2 3 **4** Skills and Procedures 1 2 3 **4** Mathematical Relationships 1 2 3 **4** **Summary / Justification / Evidence** Redwood examples **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 **4**

Reviewed By: [redacted]

Title of Instructional Materials: MC(5)

MATHEMATICS: GRADE 5 – NUMBER AND OPERATIONS – FRACTIONS – 5.NF

Apply and extend previous understandings of multiplication and division to multiply and divide fractions.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
5.NF.4b 4. Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction. b. Find the area of a rectangle with fractional side lengths by tiling it with unit squares of the appropriate unit fraction side lengths, and show that the area is the same as would be found by multiplying the side lengths. Multiply fractional side lengths to find areas of rectangles, and represent fraction products as rectangular areas. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** CCSS pgs. 41-46	Important Mathematical Ideas: 1 2 3 4 Skills and Procedures: 1 2 3 4 Mathematical Relationships: 1 2 3 4 **Summary / Justification / Evidence** Real world examples; shows connectivity **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating: 1 2 3 4

Reviewed By: [redacted]

Title of Instructional Materials: HC(5)

MATHEMATICS: GRADE 5 – NUMBER AND OPERATIONS – FRACTIONS – 5.NF

Apply and extend previous understandings of multiplication and division to multiply and divide fractions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.NF.5a 5. Interpret multiplication as scaling (resizing), by: a. Comparing the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** CC5547	Important Mathematical Ideas: 1 2 3 **4** Skills and Procedures: 1 2 3 **4** Mathematical Relationships: 1 2 3 **4** **Summary / Justification / Evidence** Reasonable/logical explanation of concept **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating: 1 2 3 **4**

Reviewed By: [redacted]

Title of Instructional Materials: [redacted]

MATHEMATICS: GRADE 5 – NUMBER AND OPERATIONS – FRACTIONS – 5.NF

Apply and extend previous understandings of multiplication and division to multiply and divide fractions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.NF.5b 5. Interpret multiplication as scaling (resizing), by: b. Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and relating the principle of fraction equivalence $a/b = (n \times a)/(n \times b)$ to the effect of multiplying a/b by 1. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** See previous page	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 4

Reviewed By: [redacted]

Title of Instructional Materials: MC(5)

MATHEMATICS: GRADE 5 – NUMBER AND OPERATIONS – FRACTIONS – 5.NF

Apply and extend previous understandings of multiplication and division to multiply and divide fractions.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
5.NF.6 *Solve real world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem.* **Indicate the chapter(s), section(s), and/or page(s) reviewed.** See pages 28-29 CCSS p. 88. 48-51	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** Uses real-world problems **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 4

Reviewed By: [redacted]

Title of Instructional Materials: MC (5)

MATHEMATICS: GRADE 5 – NUMBER AND OPERATIONS – FRACTIONS – 5.NF

Apply and extend previous understandings of multiplication and division to multiply and divide fractions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.NF.7a 7. Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions.[1] a. Interpret division of a unit fraction by a non-zero whole number, and compute such quotients. *For example, create a story context for (1/3) ÷ 4, and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that (1/3) ÷ 4 = 1/12 because (1/12) × 4 = 1/3.* 1 Students able to multiply fractions in general can develop strategies to divide fractions in general, by reasoning about the relationship between multiplication and division. But division of a fraction by a fraction is not a requirement at this grade. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** CCSC pgs. 58-61	Important Mathematical Ideas 1 2 3 **4** Skills and Procedures 1 2 3 **4** Mathematical Relationships 1 2 3 **4** **Summary / Justification / Evidence** Real-world examples/application **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 **4**

Reviewed By: [redacted]

Title of Instructional Materials: HC(5)

MATHEMATICS: GRADE 5 – NUMBER AND OPERATIONS – FRACTIONS – 5.NF

Apply and extend previous understandings of multiplication and division to multiply and divide fractions.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
5.NF.7b 7. Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions.[1] b. Interpret division of a whole number by a unit fraction, and compute such quotients. *For example, create a story context for 4 ÷ (1/5), and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that 4 ÷ (1/5) = 20 because 20 × (1/5) = 4.*	Important Mathematical Ideas: 1 2 3 4 Skills and Procedures: 1 2 3 4 Mathematical Relationships: 1 2 3 4
1 Students able to multiply fractions in general can develop strategies to divide fractions in general, by reasoning about the relationship between multiplication and division. But division of a fraction by a fraction is not a requirement at this grade. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** CCSS pg. 52-57	**Summary / Justification / Evidence** Real World examples & activities (Hot problem Lesson 17) **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating: 1 2 3 4

Reviewed By: [redacted]

Title of Instructional Materials: MC(5)

MATHEMATICS: GRADE 5 – NUMBER AND OPERATIONS – FRACTIONS – 5.NF

Apply and extend previous understandings of multiplication and division to multiply and divide fractions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.NF.7c 7. Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions.[1] c. Solve real world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions, e.g., by using visual fraction models and equations to represent the problem. *For example, how much chocolate will each person get if 3 people share 1/2 lb of chocolate equally? How many 1/3-cup servings are in 2 cups of raisins?* 1 Students able to multiply fractions in general can develop strategies to divide fractions in general, by reasoning about the relationship between multiplication and division. But division of a fraction by a fraction is not a requirement at this grade. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** CCSS pgs 58-65	Important Mathematical Ideas: 1 2 3 **4** Skills and Procedures: 1 2 3 **4** Mathematical Relationships: 1 2 3 **4** **Summary / Justification / Evidence** Real World examples / HOT problems Fair Share Lesson ★ **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating: 1 2 3 **4**

Reviewed By: [redacted]

Title of Instructional Materials: MC(5)

MATHEMATICS: GRADE 5 – MEASUREMENT AND DATA – 5.MD

Convert like measurement units within a given measurement system.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
5.MD.1 Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real world problems. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** pg. 477-480, 484-490 > Customary pg. 519-521, 524-530 > Metric	Important Mathematical Ideas 1 2 3 **4** Skills and Procedures 1 2 3 **4** Mathematical Relationships 1 2 3 **4** **Summary / Justification / Evidence** Through explanation, Real World examples * ex. pg 518 (Elementary) Hot problem **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 **4**

Reviewed By: [redacted]

Title of Instructional Materials: YC(5)

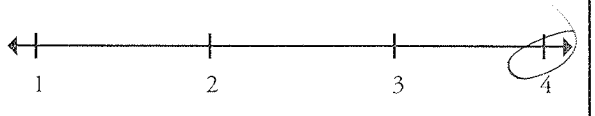
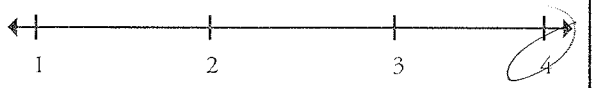
MATHEMATICS: GRADE 5 – MEASUREMENT AND DATA – 5.MD

Represent and interpret data.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
5.MD.2 Make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Use operations on fractions for this grade to solve problems involving information presented in line plots. *For example, given different measurements of liquid in identical beakers, find the amount of liquid each beaker would contain if the total amount in all the beakers were redistributed equally.* **Indicate the chapter(s), section(s), and/or page(s) reviewed.** CCSS pgs 62-65	Important Mathematical Ideas 1 2 3 (4) Skills and Procedures 1 2 3 (4) Mathematical Relationships 1 2 3 (4) **Summary / Justification / Evidence** Thoroughly explains concept w/ real world example & sufficient practice **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 (4)

Reviewed By: [redacted]

Title of Instructional Materials: YC(5)

MATHEMATICS: GRADE 5 – MEASUREMENT AND DATA – 5.MD

Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
5.MD.3a 3. Recognize volume as an attribute of solid figures and understand concepts of volume measurement. a. A cube with side length 1 unit, called a "unit cube," is said to have "one cubic unit" of volume, and can be used to measure volume. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** pgs. 630-635	Important Mathematical Ideas Skills and Procedures  Mathematical Relationships  **Summary / Justification / Evidence** Sufficient activity w/ real world examples
	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):
	Overall Rating

Reviewed By: [redacted]

Title of Instructional Materials: MC(5)

MATHEMATICS: GRADE 5 – MEASUREMENT AND DATA – 5.MD

Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.MD.3b 3. Recognize volume as an attribute of solid figures and understand concepts of volume measurement. b. A solid figure which can be packed without gaps or overlaps using *n* unit cubes is said to have a volume of *n* cubic units. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** pg. 630 - 635	Important Mathematical Ideas 1 2 3 **4** Skills and Procedures 1 2 3 **4** Mathematical Relationships 1 2 3 **4** **Summary / Justification / Evidence** Sufficient explanation Remember pg. 632 **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 **4**

Reviewed By: [redacted]

Title of Instructional Materials: HC(5)

MATHEMATICS: GRADE 5 – MEASUREMENT AND DATA – 5.MD

Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.MD.4 Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and improvised units. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** See pgs. 38-39	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 4

Reviewed By: [redacted]

Title of Instructional Materials: MC(5)

MATHEMATICS: GRADE 5 – MEASUREMENT AND DATA – 5.MD

Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.MD.5a 5. Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume. a. Find the volume of a right rectangular prism with whole-number side lengths by packing it with unit cubes, and show that the volume is the same as would be found by multiplying the edge lengths, equivalently by multiplying the height by the area of the base. Represent threefold whole-number products as volumes, e.g., to represent the associative property of multiplication. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** pgs. 631-635	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** May lack explanation of associative prop. Overall Rating 1 2 3 4

Reviewed By: [redacted]

Title of Instructional Materials: MC(5)

MATHEMATICS: GRADE 5 – MEASUREMENT AND DATA – 5.MD

Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.MD.5b 5. Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume. b. Apply the formulas $V = l \times w \times h$ and $V = b \times h$ for rectangular prisms to find volumes of right rectangular prisms with whole-number edge lengths in the context of solving real world and mathematical problems. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** pgs. 631-635 644-647	Important Mathematical Ideas: 1 2 3 **4** Skills and Procedures: 1 2 3 **4** Mathematical Relationships: 1 2 **3** 4 **Summary / Justification / Evidence** Sufficient explanation w/ practical real-world application **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** May lack $V = b \times h$ explanation Overall Rating: 1 2 **3** **4**

Reviewed By: [redacted]

Title of Instructional Materials: HC(5)

MATHEMATICS: GRADE 5 – MEASUREMENT AND DATA – 5.MD

Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.MD.5c 5. Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume. c. Recognize volume as additive. Find volumes of solid figures composed of two non-overlapping right rectangular prisms by adding the volumes of the non-overlapping parts, applying this technique to solve real world problems. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** CCSS pg. 66	Important Mathematical Ideas: 1 2 3 **4** Skills and Procedures: 1 2 3 **4** Mathematical Relationships: 1 2 **3** 4 **Summary / Justification / Evidence** Connected concept to surface area and volume **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** *May require more practical application e.g. skyscrapers Overall Rating: 1 2 **3** 4

Reviewed By: [redacted]

Title of Instructional Materials: 140(5)

MATHEMATICS: GRADE 5 – GEOMETRY – 5.G

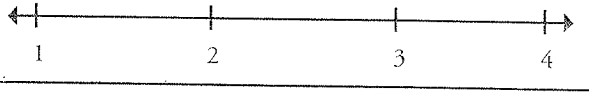
Graph points on the coordinate plane to solve real-world and mathematical problems.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
5.G.1 Use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates. Understand that the first number indicates how far to travel from the origin in the direction of one axis, and the second number indicates how far to travel in the direction of the second axis, with the convention that the names of the two axes and the coordinates correspond (e.g., x-axis and x-coordinate, y-axis and y-coordinate). **Indicate the chapter(s), section(s), and/or page(s) reviewed.** pg. 250 - 252 pg. 254 - 257	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** Real world - HOT problems Sufficient explanation **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 4

Reviewed By: [redacted]

Title of Instructional Materials: MC(5)

MATHEMATICS: GRADE 5 – GEOMETRY – 5.G

Graph points on the coordinate plane to solve real-world and mathematical problems.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
5.G.2 Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** See pg. 44 (C.A.D. Center packet)	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 4



Reviewed By: [redacted]

Title of Instructional Materials: Mc(5)

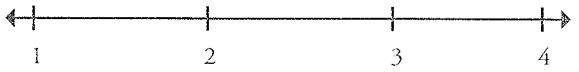
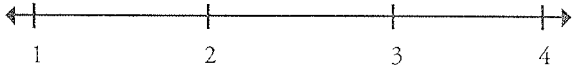
MATHEMATICS: GRADE 5 – GEOMETRY – 5.G

Classify two-dimensional figures into categories based on their properties.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
5.G.3 Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category. *For example, all rectangles have four right angles and squares are rectangles, so all squares have four right angles.* **Indicate the chapter(s), section(s), and/or page(s) reviewed.** pg. 566 - 574	Important Mathematical Ideas: 1 2 3 **4** Skills and Procedures: 1 2 3 **4** Mathematical Relationships: 1 2 **3** 4 **Summary / Justification / Evidence** - Real world problems - Proper activities HOT problems **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Does not sufficiently break down quadrilaterals except in problem set. Overall Rating: 1 2 **3** 4

Reviewed By: [redacted]

Title of Instructional Materials: MC(5)

MATHEMATICS: GRADE 5 – GEOMETRY – 5.G

Classify two-dimensional figures into categories based on their properties.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
5.G.4 Classify two-dimensional figures in a hierarchy based on properties. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** See page 46 (CAD center) for explanation	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships **Summary / Justification / Evidence**
	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):
	Overall Rating

Reviewed By: [redacted]

Title of Instructional Materials: Macmillan- McGraw Hill

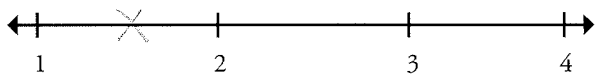
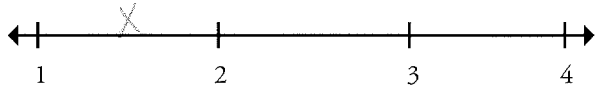
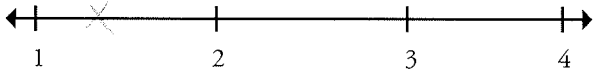
MATHEMATICS: GRADE 5 – NUMBER AND OPERATIONS–FRACTIONS – 5.NF

Use equivalent fractions as a strategy to add and subtract fractions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.NF.1 Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators. *For example, 2/3 + 5/4 = 8/12 + 15/12 = 23/12. (In general, a/b + c/d = (ad + bc)/bd.)* **Indicate the chapter(s), section(s), and/or page(s) reviewed.** Addition - Chapter 10, pp. 418, 421-425, 432-436, 465 Subtraction - Chapter 10, pp. 418, 426-431, 437-441, 465 Least Common Denominator - Chapter 10, pp. 402-405 Addition of Mixed Numbers - Chapter 10, pp. 448-451, 467 Subtraction of Mixed Numbers - Chapter 10, pp. 453-455, 458-461	Important Mathematical Ideas 1 2 3 X 4 Skills and Procedures 1 2 3 X 4 Mathematical Relationships 1 2 3 X 4 **Summary / Justification / Evidence** Students are asked to add and subtract fractions and mixed numbers using equivalent fractions (and LCM). Base-Ten blocks are used as examples and relevant word problems are integrated with computation problems. Students are asked to regroup when sub. mixed #'s **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 X 4

Reviewed By: [redacted]

Title of Instructional Materials: Macmillan - McGraw Hill

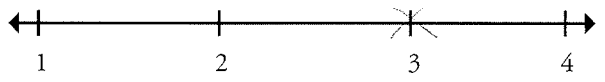
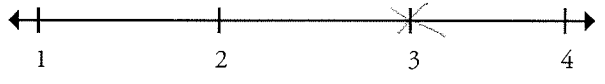
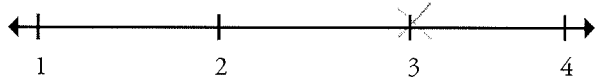
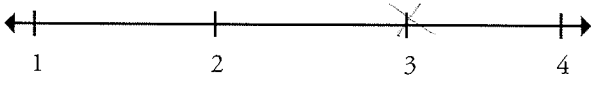
MATHEMATICS: GRADE 5 – NUMBER AND OPERATIONS–FRACTIONS – 5.NF

Use equivalent fractions as a strategy to add and subtract fractions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.NF.2 Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers. *For example, recognize an incorrect result 2/5 + 1/2 = 3/7, by observing that 3/7 < 1/2.* **Indicate the chapter(s), section(s), and/or page(s) reviewed.** Addition - Chapter 10, pp. 418, 421-425, 434-438 Subtraction - Chapter 10, pp. 418, 426-431, 439-443 Estimation - Chapter 10, pp. 444-447 Mixed Numbers - Chapter 10, pp. 448-461	Important Mathematical Ideas  Skills and Procedures Mathematical Relationships  **Summary / Justification / Evidence** Word problems are present. **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** No evidence of exploring "reasonableness" with sums/differences or using benchmark fractions. The only estimation rounds to nearest whole with mixed numbers. Overall Rating 

Reviewed By: [redacted]

Title of Instructional Materials: Macmillan - McGraw Hill

MATHEMATICS: GRADE 5 – NUMBER AND OPERATIONS–FRACTIONS – 5.NF

Apply and extend previous understandings of multiplication and division to multiply and divide fractions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.NF.3 Interpret a fraction as division of the numerator by the denominator ($a/b = a \div b$). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers, e.g., by using visual fraction models or equations to represent the problem. *For example, interpret 3/4 as the result of dividing 3 by 4, noting that 3/4 multiplied by 4 equals 3, and that when 3 wholes are shared equally among 4 people each person has a share of size 3/4. If 9 people want to share a 50-pound sack of rice equally by weight, how many pounds of rice should each person get? Between what two whole numbers does your answer lie?* **Indicate the chapter(s), section(s), and/or page(s) reviewed.** Chapter 8, pp. 333-335, 336-337, 338-342 Related problems were found throughout this chapter but not in the following chapters.	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary / Justification / Evidence** Students are asked to solve word problems using models (and to use equations in a few problems later in the chapter) **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** This skill doesn't seem to have enough practice to instill mastery. Overall Rating 

Reviewed By: [redacted]

Title of Instructional Materials: Macmillan-McGraw Hill

MATHEMATICS: GRADE 5 – NUMBER AND OPERATIONS – FRACTIONS – 5.NF

Apply and extend previous understandings of multiplication and division to multiply and divide fractions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.NF.4a 4. Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction. a. Interpret the product $(a/b) \times q$ as a parts of a partition of q into b equal parts; equivalently, as the result of a sequence of operations $a \times q \div b$. *For example, use a visual fraction model to show (2/3) × 4 = 8/3, and create a story context for this equation. Do the same with (2/3) × (4/5) = 8/15. (In general, (a/b) × (c/d) = ac/bd.)* **Indicate the chapter(s), section(s), and/or page(s) reviewed.** IN 10 – IN 14 (FRACTIONS) IN 12 – IN 14 (MIXED NUMBERS) The CCSS Connections literature says lessons are available on pp listed as CCSS 37-51 but I couldn't find them in the student book. Another add-on??	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** Students are asked to multiply fractions by fractions, fractions by whole numbers, fractions by mixed numbers, and mixed numbers by mixed numbers. **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** ONLY AS AN ADD-ON (2) BEGINNING OF BOOK TO SATISFY INDIANA STANDARDS (A) NO EXTRA PRACTICE IN ACTUAL TEXTBOOK. Overall Rating 1 2 3 4

Reviewed By: [redacted]

Title of Instructional Materials: Macmillan - McGraw Hill

MATHEMATICS: GRADE 5 – NUMBER AND OPERATIONS – FRACTIONS – 5.NF

Apply and extend previous understandings of multiplication and division to multiply and divide fractions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.NF.4b 4. Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction. b. Find the area of a rectangle with fractional side lengths by tiling it with unit squares of the appropriate unit fraction side lengths, and show that the area is the same as would be found by multiplying the side lengths. Multiply fractional side lengths to find areas of rectangles, and represent fraction products as rectangular areas. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** Chapter 14, pp. 612 – 623 IN 10 – IN 14 The CCSS Connections publication listed related pages CCSS 37-46 but I couldn't find them in the student book. Another add-on??	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** Two problems in add-on section @ beginning of book **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Students are not asked to find the area of rectangles with fractional side lengths in the chapter on area. Overall Rating 1 2 3 4

Reviewed By: [redacted]

Title of Instructional Materials: Macmillan - McGraw Hill

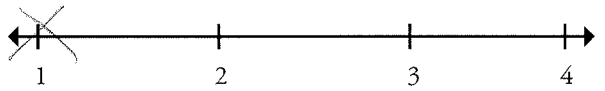
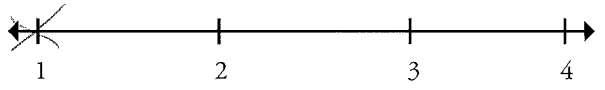
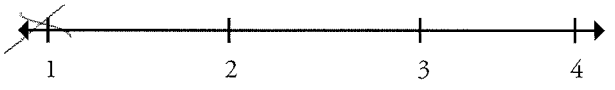
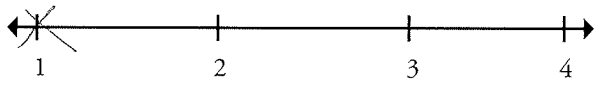
MATHEMATICS: GRADE 5 – NUMBER AND OPERATIONS – FRACTIONS – 5.NF

Apply and extend previous understandings of multiplication and division to multiply and divide fractions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.NF.5a 5. Interpret multiplication as scaling (resizing), by: a. Comparing the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** Patterns - Chapter 3, pp. 103-105, 139 Multiplication - Chapter 3, pp. 116-118, 132, 135, 138-145 Estimating Products - Chapter 3, pp. 113-115 The CCSS Connections publication listed CCSS 3.7-4e, but I couldn't find them in the student book. Another add-on?	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** Patterns in multiplication by multiples of 10. **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** No evidence of comparison of factors and product in relationship to scaling (except with multiples of 10) Overall Rating 1 2 3 4

Reviewed By: [redacted]

Title of Instructional Materials: Macmillan - McGraw Hill

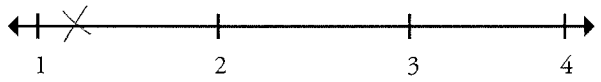
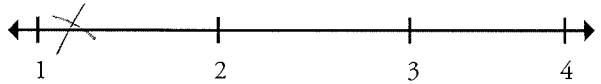
MATHEMATICS: GRADE 5 – NUMBER AND OPERATIONS – FRACTIONS – 5.NF

Apply and extend previous understandings of multiplication and division to multiply and divide fractions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.NF.5b 5. Interpret multiplication as scaling (resizing), by: b. Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and relating the principle of fraction equivalence $a/b = (n \times a)/(n \times b)$ to the effect of multiplying a/b by 1. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** IN 10-IN 14 (MULTIPLYING FRACTIONS/MIXED #'s) Chapter 3, pp. 132-135 (DECIMALS) CCSS 47 ?	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary / Justification / Evidence**
	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any): The size of a product based on whether the factor(s) are less than or greater than one is not addressed.
	Overall Rating 

Reviewed By: [redacted]

Title of Instructional Materials: Macmillan - McGraw Hill

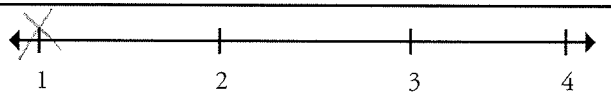
MATHEMATICS: GRADE 5 – NUMBER AND OPERATIONS – FRACTIONS – 5.NF

Apply and extend previous understandings of multiplication and division to multiply and divide fractions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.NF.6 *Solve real world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem.* **Indicate the chapter(s), section(s), and/or page(s) reviewed.** IN 10 - IN 14 CCSS 37-51 ??	Important Mathematical Ideas  Skills and Procedures Mathematical Relationships  **Summary / Justification / Evidence** Few problems in add-on section at beginning of book. **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** No problems in regular text Overall Rating

Reviewed By: [redacted]

Title of Instructional Materials: Macmillan - McGraw Hill

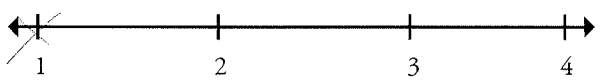
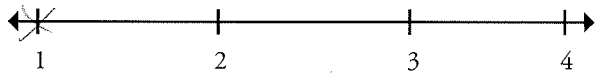
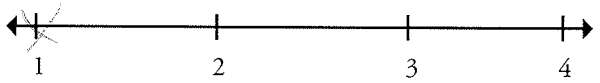
MATHEMATICS: GRADE 5 – NUMBER AND OPERATIONS – FRACTIONS – 5.NF

Apply and extend previous understandings of multiplication and division to multiply and divide fractions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.NF.7a 7. Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions.[1] a. Interpret division of a unit fraction by a non-zero whole number, and compute such quotients. *For example, create a story context for (1/3) ÷ 4, and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that (1/3) ÷ 4 = 1/12 because (1/12) × 4 = 1/3.* 1 Students able to multiply fractions in general can develop strategies to divide fractions in general, by reasoning about the relationship between multiplication and division. But division of a fraction by a fraction is not a requirement at this grade. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** CCSS 58-61 ??	Important Mathematical Ideas Skills and Procedures Mathematical Relationships **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Not addressed Overall Rating 

Reviewed By: [redacted]

Title of Instructional Materials: Macmillan - McGraw Hill

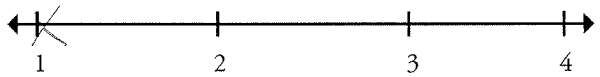
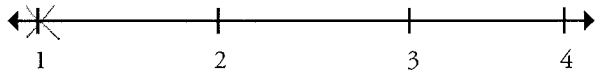
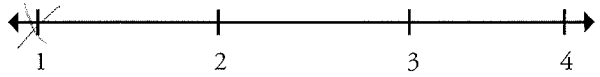
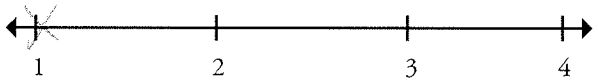
MATHEMATICS: GRADE 5 – NUMBER AND OPERATIONS – FRACTIONS – 5.NF

Apply and extend previous understandings of multiplication and division to multiply and divide fractions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.NF.7b 7. Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions.[1] b. Interpret division of a whole number by a unit fraction, and compute such quotients. *For example, create a story context for 4 ÷ (1/5), and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that 4 ÷ (1/5) = 20 because 20 × (1/5) = 4.* 1 Students able to multiply fractions in general can develop strategies to divide fractions in general, by reasoning about the relationship between multiplication and division. But division of a fraction by a fraction is not a requirement at this grade. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** CCSS 52-57 ??	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Not addressed Overall Rating 

Reviewed By: [redacted]

Title of Instructional Materials: Macmillan- McGraw Hill

MATHEMATICS: GRADE 5 – NUMBER AND OPERATIONS – FRACTIONS – 5.NF

Apply and extend previous understandings of multiplication and division to multiply and divide fractions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5.NF.7c 7. Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions.[1] c. Solve real world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions, e.g., by using visual fraction models and equations to represent the problem. *For example, how much chocolate will each person get if 3 people share 1/2 lb of chocolate equally? How many 1/3-cup servings are in 2 cups of raisins?* 1 Students able to multiply fractions in general can develop strategies to divide fractions in general, by reasoning about the relationship between multiplication and division. But division of a fraction by a fraction is not a requirement at this grade. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** CCSS 58-65??	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Not addressed Overall Rating